

- (क) मूल्यहासः प्रत्येक कार्य की नियत संपत्ति के आवंटन के आधार पर, प्रत्येक संपत्ति के मूल्यहास को क्रमशः उप-समूहों में आवंटित किया जा सकता है।
- (ख) ब्याज एवं वित्तीय प्रभारः वितरण कंपनी या तो प्रत्येक व्यवसाय हेतु लिए गए ऋण को निर्धारित करेगा जो व्यवसाय की प्रकृति पर आधारित होगा या संपत्ति आवंटन के अनुपात के आधार पर आवंटित करेगा। ब्याज एवं वित्तीय प्रभारों को निर्धारित ऋण के आधार पर संबंधित कार्य हेतु प्रभारित किया जा सकता है।
- (ग) प्रतिफलः प्रतिफल को चक्रण तथा खुदरा प्रदाय व्यवसाय के मध्य नियत संपत्तियों के प्रस्तावित अनुपात पर आवंटित किया जाएगा।

### 3. संचालन एवं प्रबंधन (ओएवंएम) व्यय

ओएवंएम व्ययों के लिए प्रस्तावित आवंटन को निम्न प्रकार वर्णित किया जाता है:

- (क) नियोजित लागतः खुदरा प्रदाय व्यवसाय के तहत नियोजित आवश्यकता के आधार पर नियोजित लागत को अलग करना। वितरण कंपनी उस नियोजन की संख्या का मूल्यांकन कर सकती है जो खुदरा प्रदाय व्यवसाय के लिए आवंटित की जा सकती है। इस मूल्यांकन को अंगूठे के नियम के आधार पर किया जा सकता है:
- ऊर्जा खरीद टीम/प्रभाग को खुदरा प्रदाय व्यवसाय के लिए आवंटित किया जा सकता है,
  - मीटरिंग, बिलिंग और संग्रहण में शामिल कर्मचारियों की संख्या को खुदरा प्रदाय व्यवसाय के लिए आवंटित किया जा सकता है, और
  - कोई भी अन्य जिसे वितरण कंपनी प्रासंगिक समझती हो।
- शेष कर्मचारियों को चक्रण व्यवसाय के लिए समझा जाएगा। वितरण लाइसेंसधारी कर्मचारियों की सूची को विभिन्न स्तरों पर संकलित करेगा और समान को उक्त वर्णित दृष्टिकोण के लिए आवंटित करेगा। इसके बाद नियोजित लागत स्वतः ही चक्रण और खुदरा प्रदाय के मध्य आवंटित हो जाएगी, जो संबंधित व्यवसाय हेतु आवंटित नियोजनों पर आधारित होगा। नियोजित पूंजीकरण पर चक्रण व्यवसाय के एआरआर में विचार किया जाएगा।
- (ख) एएवंजी लागतः विद्युत खरीद, मीटरिंग, बिलिंग और संग्रहण, खुदरा प्रदाय व्यवसाय से संबंधित ऋण पर वित्तीय व्ययों से संबंधित एएवंजी व्ययों को खुदरा प्रदाय व्यवसाय हेतु आवंटित किया जाएगा। टेलीफोन, रेशनरी, चल्किंग सिटी, पट्टे का किराया आदि जैसे कार्यालय खर्चों को प्रमुख उपयोग अवधारणा के आधार पर चक्रण और खुदरा प्रदाय व्यवसाय के मध्य विभाजित किया जाएगा।
- (ग) आरएवंएम व्ययः आरएवंएम व्ययों को चक्रण एवं खुदरा प्रदाय व्यवसाय के मध्य नियत संपत्ति के प्रस्तावित अनुपात पर आवंटित किया जाएगा। अधिक सटीकता प्राप्त करने के उद्देश्य के लिए, आवंटन को चक्रण तथा खुदरा प्रदाय व्यवसाय के तहत वर्गीकृत अनुपात में आने वाले निश्चित संपत्ति वर्ग से संबंधित आरएवंएम उप-प्रधान को आवंटित करते हुए विभाजित किया जाना चाहिए, अर्थात् आरएवंएम (संयंत्र एवं मशीनरी) को चक्रण एवं खुदरा प्रदाय व्यवसाय के तहत वर्गीकृत संयंत्र और मशीनरी के सकल नियत संपत्ति मूल्य के अनुपात में आवंटित किया जा सकता है।

### अन्य/विविध व्यय

उपरोक्त वर्णित व्ययों के अलावा, खुदरा प्रदाय व्यवसाय उपभोक्ता सुरक्षा जमा पर ब्याज, यूआई प्रभार, एलपीएससी के वित्तपोषण के लिए व्ययों हेतु भी जिम्मेदार होगा।

## DELHI ELECTRICITY REGULATORY COMMISSION

### NOTIFICATION

Delhi, the 19th January, 2012

### Regulations on Terms & Conditions for Determination Generation Tariff

No. F. 3(290)/Tariff/DERC/2011-12/C.F. 3180 – The Commission having deliberated on the draft Delhi Electricity Regulatory Commission (Terms and Conditions for Determination of Generation Tariff) Regulations 2011 and after having considered the responses received from various stakeholders and in exercise of powers vested under the Electricity Act, 2003, hereby approves the Delhi Electricity Regulatory Commission (Terms & Conditions for Determination of Generation Tariff) Regulations, 2011.

#### A1: SHORT TITLE, COMMENCEMENT AND EXTENT

- These Regulations shall be called "Delhi Electricity Regulatory Commission (Terms and Conditions for Determination of Generation Tariff) Regulations, 2011".
- These Regulations shall extend to the whole of National Capital Territory of Delhi.
- These Regulations shall come into force on April 1, 2012 and unless reviewed earlier or extended by the Commission shall remain in force for a period of three year from the date of commencement.
- Provided that where a Project, or a part thereof, has been declared under commercial operation before the date of commencement of these Regulations and whose Tariff has not been finally determined by the Delhi Electricity Regulatory Commission till that date, tariff in respect of such Project or such part thereof, as the case may be, for the period ending 31.3.2012 shall be determined in accordance with the Delhi Electricity Regulatory Commission (Terms and Conditions for Determination of Generation Tariff) Regulations, 2007.

#### A2: DEFINITIONS AND INTERPRETATION

- In these Regulations, unless the context otherwise requires-

- "Act" means the Electricity Act, 2003 (36 of 2003), including amendments thereto;
- "Additional Capitalisation" means the capital expenditure incurred or projected to be incurred, after the date of commercial operation of the project and admitted by the Commission after prudence check, subject to provisions of clause A6:8, A6:10 of these Regulations;
- "Applicant" means a generating company who has made an application for determination of tariff or an application for annual performance review in accordance with the Act and these Regulations and includes a generating company

whose tariff is the subject of a review by the Commission either suo motu or on a petition filed by any interested or affected person or as part of an annual performance review;

- (iv) **"Auxiliary Energy Consumption" or "AUX"** in relation to a period in case of a generating station means the quantum of energy consumed by auxiliary equipment of the generating station, and transformer losses within the generating station, expressed as a percentage of the sum of gross energy generated at the generator terminals of all the Units of the generating station;
- (v) **"Auditor"** means an auditor appointed by the generating company in accordance with the provisions of sections 224, 233B and 619 of the Companies Act, 1956 (1 of 1956), or any other law for the time being in force;
- (vi) **"Base Year"** means the Financial Year immediately preceding the first year of the Control Period, and used for the purposes of these Regulations;
- (vii) **"Beneficiary"** in relation to a generating station means the person purchasing electricity generated at such a generating station whose tariff is determined under these Regulations;
- (viii) **"Block"** in relation to a combined cycle thermal generating station includes combustion turbine-generator, associated waste heat recovery boiler, connected steam turbine-generator and auxiliaries;
- (ix) **"CERC"** means the Central Electricity Regulatory Commission;
- (x) **"Change in Law"** means occurrence of any of the following events:
  - (i) the enactment, bringing into effect, adoption, promulgation, amendment, modification or repeal of any law; or
  - (ii) change in interpretation of any law by a competent court, Tribunal or Indian Governmental Instrumentality which is the final authority under law for such interpretation; or
  - (iii) change by any competent statutory authority, in any consent, approval or licence available or obtained for the project.
- (xi) **"Commission"** means the Delhi Electricity Regulatory Commission;
- (xii) **"Conduct of Business Regulations"** means the Delhi Electricity Regulatory Commission Comprehensive (Conduct of Business) Regulations, 2001, as amended from time to time;
- (xiii) **"Control Period"** means a multi-year period fixed by the Commission, from 1st April 2012 and up to 31st March 2015;
- (xiv) **"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;
- (xv) **"Date of Commercial Operation" or 'COD'** in relation to a unit or block of the thermal generating station, the date declared by the generating company after demonstrating the maximum continuous rating (MCR) or the installed capacity (IC) through a successful trial run after notice to the beneficiaries, from 0000 hour of which scheduling process as per the Indian Electricity Grid Code (IEGC) is fully implemented and in relation to the generating station as a whole the Date of Commercial Operation of the last unit or block of the generating station;
- (xvi) **"Day"** means the 24 hour period starting at 0000 hour;
- (xvii) **"Declared Capacity" or 'DC'** in relation to a generating station means, the capability to deliver ex-bus electricity in MW declared by such generating station in relation to any time-block of the day or whole of the day, duly taking into account the availability of fuel or water, and subject to further qualification in the relevant regulation;
- (xviii) **"Expenditure Incurred"** means the fund, whether the equity or debt or both, actually deployed and paid in cash or cash equivalent, for creation or acquisition of a useful asset and does not include commitments or liabilities for which no payment has been released;
- (xix) **"Financial Year"** means a period commencing on 1st April of a calendar year and ending on 31st March of the subsequent calendar year;
- (xx) **"Gross Calorific Value" or 'GCV'** in relation to a thermal generating station means the heat produced in kCal by complete combustion of one kilogram of solid fuel or one litre of liquid fuel or one standard cubic meter of gaseous fuel, as the case may be;

- (xxi) **"Gross Station Heat Rate" or 'GHR'** means the heat energy input in kCal required to generate one kWh of electrical energy at generator terminals of a thermal generating station;
- (xxii) **"Infirm Power"** means electricity injected into the grid prior to the commercial operation of a unit or block of the generating station;
- (xxiii) **"Installed Capacity" or 'IC'** means the summation of the name plate capacities of all the Units of the generating station or the capacity of the generating station (reckoned at the generator terminals), approved by the Commission from time to time;
- (xxiv) **"Maximum Continuous Rating" or 'MCR'** in relation to a unit of the thermal generating station means the maximum continuous output at the generator terminals, guaranteed by the manufacturer at rated parameters, and in relation to a Block of a combined cycle thermal generating station means the maximum continuous output at the generator terminals, guaranteed by the manufacturer with water/steam injection (if applicable) and corrected to 50 Hz grid frequency and specified site conditions;
- (xxv) **"Normative Annual Plant Availability Factor" or 'NAPAF'** in relation to a generating station means the availability factor specified in clause A7:1 and clause A7:9 of these Regulations;
- (xxvi) **"Operation and Maintenance Expenses" or 'O&M expenses'** means the expenditure incurred on operation and maintenance of the project, or part thereof, and includes the expenditure on manpower, repairs, spares, consumables, insurance and overheads;
- (xxvii) **"Original Project Cost"** means the capital expenditure incurred by the generating company, within the original scope of the project up to the cut-off date as admitted by the Commission;
- (xxviii) **"Plant Availability Factor (PAF)"** in relation to a generating station for any period means the average of the daily declared capacities (DCs) for all the days during that period expressed as a percentage of the installed capacity in MW reduced by the normative auxiliary energy consumption.
- (xxix) **"Project"** means a generating station;
- (xxx) **"State Load Dispatch Centre" or 'SLDC'** means the centre established by the State Government for purposes of exercising the powers and discharging the functions under Section 31 of the Act;
- (xxxi) **"Scheduled Energy"** means the quantum of energy scheduled by the State Load Dispatch Centre to be injected into the grid by a generating station over a day;
- (xxxii) **"Scheduled Generation" or 'SG'** at any time or for any period or time-block means schedule of generation in MW or MWh ex-bus, given by the State Load Dispatch Centre;
- (xxxiii) **Note**
- (xxxiv) For the open cycle gas turbine generating station or a combined cycle generating station if the average frequency for any time-block, is below 49.52 Hz but not below 49.02 Hz and the scheduled generation is more than 98.5% of the declared capacity, the scheduled generation shall be deemed to have been reduced to 98.5% of the declared capacity, and if the average frequency for any time-block is below 49.02 Hz and the scheduled generation is more than 96.5% of the declared capacity, the scheduled generation shall be deemed to have been reduced to 96.5% of the declared capacity.
- (xxxv) **"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;
- (xxxvi) **"State"** means the National Capital Territory of Delhi;
- (xxxvii) **"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.
- (xxxviii) **"Useful life"** in relation to a unit of a Coal / Gas based thermal generating station from the COD shall be 25 years.

2 Words and expressions used in these Regulations and not defined herein but defined in the Act shall have meaning assigned to them under the Act.

3 All proceedings under these Regulations shall be governed by the Conduct of Business Regulations.

**A3: SCOPE OF REGULATIONS AND EXTENT OF APPLICATION**

1 These Regulations shall apply in all cases of determination of generation tariff under Section 62 of the Act, for supply of electricity to a distribution licensee by existing generating stations, but shall not apply where tariff has been determined through the transparent process of bidding in accordance with the guidelines issued by the Central Government as per the provisions of Section 63 of the Act.

2 Subject to the provisions of the Act, Rules and Policies, any new generating station which comes up in future and proposes to supply electricity to a distribution licensee of the State shall be subjected to the norms prescribed under these Regulations by the Commission, unless it proposes to supply electricity through bidding in accordance with the guidelines issued by the Central Government as per provisions of Section 63 of the Act.

**A4: DETERMINATION OF GENERATION TARIFF****1 Existing Generating Station:**

Where the Commission has, at any time prior to the notification of these Regulations, approved a Power Purchase Agreement (PPA) or arrangement between a generating company and a Beneficiary, or has adopted the tariff contained therein for supply of electricity from an existing generating station then the tariff for supply of electricity by the generating company to the Distribution Licensee shall be in accordance with such PPA or arrangement for such period as may be so approved or adopted by the Commission, to the extent of existing Installed Capacity as contained in the PPA.

**2 New Generating Station:**

(i) Where the generating station has been declared under commercial operation from a date after the issue of these Regulations or on or after April 1, 2012, the tariff for supply of electricity by the generating company shall be decided in accordance with these Regulations.

**A5: GENERAL APPROACH AND GUIDING PRINCIPLES**

1 The Commission in specifying these Regulations shall be guided by the principles contained in Sections 61 and 62 of the Act to encourage competition, efficiency, economical use of resources, good performance and optimum investments.

2 The Commission shall adopt Multi Year Tariff Framework for determination of tariff for each year of the Control Period.

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

- (i) Business Plan of the generating company (plant wise separately) for the entire Control Period to be submitted to the Commission for approval, prior to the start of the Control Period;
- (ii) Applicant's forecast of expected tariff for sale of power for each year of the Control Period, based on reasonable assumptions of the underlying financial and operational parameters, as submitted in the Business Plan;
- (iii) Trajectory for specific parameters shall be stipulated by the Commission, where the performance of the Applicant is sought to be improved through incentives and disincentives;
- (iv) Annual review of performance shall be conducted vis-à-vis the approved forecast.

**Baseline**

4 The baseline values (operating and cost parameters) for the Control Period shall be determined by the Commission and shall be based on the approved values by the Commission, latest accounting statements, estimate of the actuals for the relevant year and other factors considered appropriate by the Commission.

5 The Commission shall normally not revisit the performance targets even if the targets are fixed on the basis of un-audited accounts.

**Capital Investment**

6 Subject to the provisions of Act, Rules and Policies, the Commission shall approve capital investment plan of an existing generating company for the Control Period commensurate with generation capacity growth. The investment plan shall also include corresponding capitalisation schedule and financing plan.

7 For the Annual Performance Review, Generation Company shall submit the actual capital expenditure incurred and capitalisation during the year under review along with the Annual Performance Review Filing.

8 The Commission shall review actual capital expenditure incurred and capitalisation at the end of each year of the Control Period vis-à-vis the approved capital expenditure and capitalisation schedule. Based on trued up capital expenditure and capitalisation, the Commission shall true up Return on Capital Employed (RoCE) and depreciation while truing up for any year of the Control Period. The Commission may also revise the capital expenditure and capitalisation for remaining years of the Control Period based on trued up capital expenditure and capitalisation for any year.

9 Capital expenditure shall normally be incurred by the generating company after the approval of the Commission.

**Performance Targets**

10 The Commission shall set targets for each year of the Control Period for the items or parameters that are deemed to be "controllable" and which includes:

- (i) Gross Station Heat Rate;



- (ii) Normative Annual Plant Availability Factor;
- (iii) Auxiliary Energy Consumption;
- (iv) Secondary Fuel Oil Consumption;
- (v) Operation and Maintenance Expenses;
- (vi) Financing Cost which includes cost of debt (interest), cost of equity (return); and
- (vii) Depreciation.

11 Any financial loss on account of underperformance on targets for parameters specified in Clause 10 (a) to (e) is not recoverable through tariffs. Similarly, any financial gain on account of over-performance with respect to these parameters is to the generating company's benefit and shall not be adjusted in tariffs.

12 Depreciation, Interest on Loans and Return on Equity shall be trued up every year based on the actual capital expenditure and actual capitalisation vis-à-vis capital investment plan (capital expenditure and capitalisation) approved by the Commission:

Provided that any surplus or deficit in Working Capital shall be to the account of the Licensee and shall not be trued up in ARR:

13 Provided further that the Commission shall not true up the interest rate, if variation in State Bank of India Base Rate as on April 1, 2012, is within +/- 1% during the Control Period. Any increase / decrease in State Bank of India Base Rate beyond +/- 1% only shall be trued up.

#### **A6: PRINCIPLES FOR DETERMINATION OF TARIFF**

##### **Capital Cost of the Project**

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 during construction on the loan - (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed, - up to the date of commercial operation of the project, as admitted by the Commission, as admitted by the Commission after prudence check shall form the basis for determination of tariff;
- (b) capitalised initial spares subject to the ceiling norms specified as under:
  - i. Coal-based thermal generating stations - 2.5 % of original project cost
  - ii. Gas Turbine/Combined Cycle thermal generating stations- 4.0% of original project cost

Provided that where the benchmark norms for initial spares have been published as part of the benchmark norms for capital cost under first proviso to clause 3 of these Regulations, such norms shall apply to the exclusion of the norms specified herein.

- (c) additional capital expenditure determined under clause 8 and 10 of these Regulation

2 Provided that the assets forming part of the Project, but not in use shall be taken out of the capital cost.

3 The capital cost admitted by the Commission after prudence check shall form the basis for determination of tariff.

4 Provided that in case of the thermal generating station prudence check of capital cost may be carried out based on the benchmark norms to be specified by the CERC from time to time;

5 Provided further that in cases where benchmark norms have not been specified, 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;

6 Provided also that where the power purchase agreement entered into between the generating company and the beneficiaries provide for ceiling of actual expenditure, the capital expenditure admitted by the Commission shall take into consideration such ceiling for determination of tariff;

7 Provided also that in case of the existing projects, the capital cost admitted by the Commission prior to 1.4.2012 duly trued up excluding un-discharged liability, if any, as on 1.4.2012 and the additional capital expenditure projected to be incurred for the respective year of the Control Period 2012-15, as may be admitted by the Commission, shall form the basis for determination of tariff.

##### **Additional Capitalisation**

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

- (i) Undischarged liabilities;
- (ii) Works deferred for execution;
- (iii) Procurement of initial capital spares within the original scope of work, subject to the provisions under clause 1.3 of these Regulations;
- (iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court: and

## (v) Change in law.

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

10 The capital expenditure incurred on the following counts after the cut-off date may, in its discretion, be admitted by the Commission, subject to prudence check:

- (i) Liabilities to meet award of arbitration or for compliance of the order or decree of a court.
- (ii) Change in law.
- (iii) Deferred works relating to ash pond or ash handling system in the original scope of work.
- (iv) In case of gas/liquid fuel based open/combined cycle thermal generating stations, any expenditure which has become necessary on renovation of gas turbine after 15 years of operations from its COD and the expenditure necessary due to obsolescence or non-availability of spares for successful and efficient operation of the stations:

11 Provided that any expense included in R&M on consumables and cost of components and spares, which is generally covered in the R&M expenses during the major overhaul of gas turbine shall be suitably deducted after due prudence check from the R&M expenditure to be allowed

- (v) Any capital expenditure found justified after prudence check necessitated on account of modification required or done in fuel receipt system arising due to non-materialisation of fuel coal linkage in respect of thermal generating station as result of circumstances not within the control of generating station.
- (vi) Any undercharged liability towards final payment/withheld payment due to contractual exigencies for work executed within the cut-off date, after prudence check of the details of such deferred liability, total estimated cost of package, reason for such withholding of payment and release of such payment etc.
- (vii) Any other capital expenditure for meeting the operational requirement including change in nature of input parameters, environment requirement and efficiency improvement etc.

**Sale of Infirm Power**

12 Supply of infirm power shall be accounted as Unscheduled Interchange (UI) and paid for from the regional or State UI pool account at the applicable frequency-linked UI rate.

13 Provided that any revenue earned by the generating company from sale of infirm power after accounting for the fuel expenses shall be applied for reduction in capital cost.

**Debt-Equity Ratio**

14 For generating stations mentioned in the Transfer Scheme, dated July 1, 2002, the amount of loan capital shall be equal to the sum of the outstanding balance of all long term loans taken to finance the generating station, at the commencement of the Financial Year for which tariff is to be determined, as reflected in the tariff orders of the Commission.

15 The equity capital for generating stations mentioned in the Transfer Scheme, dated July 1, 2002 shall be taken as specified therein. Any fresh addition in equity after July 1, 2002 as may be approved by the Commission shall also be considered.

16 For a project declared under commercial operation on or after 1.4.2012, if the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:

- (i) Provided that in case of a generating station where equity employed is more than 30%, the amount of equity for determination of tariff shall be limited to 30% and the balance amount shall be considered as the normative loan;
- (ii) Provided also that in case of a generating station where actual equity employed is less than 30%, the actual debt and equity shall be considered for determination of tariff.

17 In case of the generating station declared under commercial operation prior to 1.4.2012, debt-equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2012 shall be considered.

18 Any expenditure incurred or projected to be incurred on or after 1.4.2012 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension the normative debt-equity ratio shall be considered to be 1:0.30 for determination of tariff:

- (i) Provided that in case of a generating station where equity employed is more than 30%, the amount of equity for determination of tariff shall be limited to 30% and the balance amount shall be considered as the normative loan;
- (ii) Provided also that in case of a generating station where actual equity employed is less than 30%, the actual debt and equity shall be considered for determination of tariff.

**Renovation and Modernisation**

19 The generating company, for meeting the expenditure on renovation and modernization (R&M) 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 including foreign exchange component, if any, record of consultation with beneficiaries and any other information considered to be relevant by the generating company.

20 Where the generating company, 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, financing plan, schedule of completion, interest during construction, use of efficient technology, cost-benefit analysis, and such other factors as may be considered relevant by the Commission.

21 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.

22 The generating company in case of thermal generating station, may, in its discretion, avail of a special allowance either for a Unit or a group of Units as compensation for meeting the requirement of expenses including Renovation and Modernization beyond the Useful life of the generating station or a Unit thereof, and in such an event revision of the capital cost shall not be considered and the applicable operational norms shall not be relaxed but the special allowance shall be included in the annual fixed cost.

23 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 commencement of these Regulations, or for a generating station or unit which is in a depleted condition or operating under relaxed operational and performance norms.

24 A generating company (coal-based thermal generating station) on opting for the alternative in the clause 22 of these Regulations, shall be allowed special allowance @ Rs. 5.91 lakh/MW/year in 2012-13 and thereafter escalated @ 5.72% every year during the Control Period 2012-15, 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 1.4.2012, this allowance shall be admissible from the year 2012-13.

**Interest and Finance Charges**

25 Interest and finance charges on loan capital shall be computed on the outstanding loans, bond or non convertible debentures as on 31.03.2012 approved by the Commission and additional loan approved during each year of the Control Period.

26 The loan repayment for each year of the Control Period 2012-15 shall be deemed to be equal to the depreciation allowed for that year.

27 The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio at the beginning of each year applicable to the project.

28 Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered;

29 Provided further that if the generating station, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company as a whole shall be considered;

30 The interest on loan shall be calculated on the normative average loan of the respective years by applying the weighted average rate of interest.

31 The interest rate on the amount of equity in excess of 30% treated as notional loan shall be the weighted average rate of the loans of the respective years and shall be further limited to the prescribed rate of return on equity in the Regulation:

- (i) Provided that all loans considered for this purpose shall be identified with the assets created;
- (ii) Provided that interest and finance charges of re-negotiated loan agreements shall not be considered, if they result in higher charges;
- (iii) Provided further that interest and finance charges on capital works in progress shall be excluded and shall be considered as part of the capital cost;
- (iv) Provided further that neither penal interest nor overdue interest shall be allowed for computation of Tariff.

32 Notwithstanding any moratorium period availed by the generating company the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the annual depreciation allowed.

33 The generating company shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such re-financing shall be borne by the beneficiaries and the net savings shall be shared between the beneficiaries and the generating company, as the case may be, in the ratio of 2:1.

34 The changes to the terms and conditions of the loans shall be reflected from the date of such re-financing.

35 In case of dispute, any of the parties may make an application in accordance with the Conduct of Business Regulations, as amended from time to time.

36 Provided that the beneficiaries shall not withhold any payment on account of the interest claimed by the generating company during the pendency of any dispute arising out of re-financing of loan

#### **Working Capital**

37 The Commission shall calculate the Working Capital requirement for coal-based generating stations as follows:

- (i) Cost of coal for 1.5 months for pithead generating stations and 2 months for non-pithead generating stations for generation corresponding to the Normative Annual Plant Availability Factor;
- (ii) Cost of secondary fuel oil for two months for generation corresponding to the Normative Annual Plant Availability Factor, and in case of use of more than one secondary fuel oil, cost of fuel oil stock for the main secondary fuel oil;
- (iii) Maintenance spares @ 20% of operation and maintenance expenses specified in clause 54- 71 of these Regulations;
- (iv) O&M expenses for 1 month; and
- (v) Receivables equivalent to 2 months of capacity charges and energy charges for sale of electricity calculated on the Normative Annual Plant Availability Factor.

38 For Open-cycle Gas Turbine/Combined Cycle thermal generating stations, the working capital requirements shall be calculated using the following components:

- (i) Fuel expenses for 1 month corresponding to the Normative Annual Plant Availability Factor, duly taking into account mode of operation of the generating station on gas fuel and liquid fuel;
- (ii) Liquid fuel stock for ½ month corresponding to the Normative Annual Plant Availability Factor duly taking into account mode of operation of the generating station of gas fuel and liquid fuel, and in case of use of more than one liquid fuel, cost of main liquid fuel;
- (iii) Maintenance spares @ 30% of operation and maintenance expenses specified in clause 54- 71 of these Regulations;
- (iv) Receivables equivalent to two months of capacity charge and energy charge for sale of electricity calculated on Normative Annual Plant Availability factor, duly taking ; and
- (v) O&M expenses for 1 month.

39 The cost of fuel in cases covered under sub-clauses (a) and (b) of clause 37 and 38 of these Regulations shall be based on the landed cost incurred (taking into account normative transit and handling losses) by the generating company and gross calorific value of the fuel as per actual for the three months preceding the first month for which tariff is to be determined and no fuel price escalation shall be provided during the Control Period.

#### **Interest on Working Capital**

40 Rate of interest on working capital shall be on normative basis and shall be equal to Base Rate of State Bank of India plus 350 basis points as on 1.4.2012 or on 1st April of the year in which the generating station or a unit thereof is declared under commercial operation, whichever is later.

41 Interest on working capital shall be payable on normative basis notwithstanding that the generating company has not taken working capital loan from any outside agency or has exceeded the working capital loan based on the normative figures.

#### **Depreciation**

42 Depreciation shall be calculated for each year of the Control Period, on the amount of Capital Cost of the Fixed Assets as admitted by the Commission;

- (i) Provided that depreciation shall not be allowed on assets funded by any capital subsidy / grant.

43 Depreciation for each year of the Control Period shall be determined based on the methodology as specified in these Regulations along with the rates and other terms specified in Appendix-I of these Regulations.

44 Depreciation shall be calculated annually, based on the straight line method, over the useful life of the asset. The base value for the purpose of depreciation shall be capital cost of the asset as admitted by the Commission.

45 Provided that, the remaining depreciable value as on 31st March of the year closing after a period of 12 years from the date of commercial operation shall be spread over the balance useful life of the assets.



46 In case of the existing Projects, the balance depreciable value as on 1.4.2012 shall be worked out by deducting the cumulative depreciation including Advance Against Depreciation as admitted by the Commission upto 31.3.2012 from the gross depreciable value of the assets. The rate of depreciation shall be continued to be charged at the rate specified in Appendix-I till cumulative depreciation reaches 70%. Thereafter the remaining depreciable value shall be spread over the remaining life of the asset such that the maximum depreciation does not exceed 90%.

47 The salvage value of the asset shall be considered as 10% and depreciation shall be allowed upto a maximum of 90% of the capital cost of the asset. Land is not a depreciable asset and its cost shall be excluded while computing 90% of the original cost of the asset. In the event of Renovation and Modernization expenditure affecting the life of the asset, the depreciation shall be allowed upto a maximum of 90% of the cost of the asset within the enhanced life span of the asset.

48 Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on a *pro rata* basis.

#### Return on Equity

49 Return on equity shall be computed on the equity determined in accordance with clauses 14 - 18 of these Regulations and shall be 14% (post tax);

50 Provided that return on equity invested in work in progress shall be allowed from the Date of Commercial Operation.

#### Tax on Income

51 Tax on the income streams of the generating company shall be recovered from the beneficiaries. Tax on income, if any, liable to be paid shall be limited to tax on return on the equity component of capital employed. Any additional tax liability on account of incentive due to improved performance like higher availability, lower station heat rate, lower auxiliary consumption, lower O&M Expenses etc and other income shall not be considered:

52 Provided that the deferred tax liability, excluding Fringe Benefit Tax, for the period up to 31st March, 2012 whenever it materializes, shall be recoverable directly from the beneficiaries and the long-term customers.

53 The actual assessment of income tax should take into account benefits of tax holiday, and the credit for carry forward losses applicable as per the provisions of the Income Tax Act 1961 shall be passed on to the consumers.

#### Operation and Maintenance Expenses

54 Normative Operation and Maintenance (O&M) expenses shall comprise the following:

- (i) Salaries, wages, pension contribution and other employee costs;
- (ii) Administrative and General costs;
- (iii) Repairs and maintenance; and
- (iv) Other miscellaneous expenses.

55 Existing Generating Stations: O&M expenses permissible towards ARR for each year of the Control Period shall be determined using the formula detailed below:

56  $O\&M_n = (R\&M_n + EMP_n + A\&G_n) * (1 - X_n)$

57 Where,

58  $R\&M_n = K * GFA_{n-1}$ ;

59  $EMP_n + A\&G_n = (EMP_{n-1} + A\&G_{n-1}) * (INDX)$ ; and

60  $INDX = 0.55 * CPI + 0.45 * WPI$

61  $EMP_n$  - Employee Costs of the Licensee for the  $n^{th}$  year;

62  $A\&G_n$  - Administrative and General Costs of the Licensee for the  $n^{th}$  year;

63  $R\&M_n$  - Repair and Maintenance Costs of the Licensee for the  $n^{th}$  year;

64  $X_n$  is an efficiency factor for  $n^{th}$  year. Value of  $X_n$  shall be determined by the Commission in the MYT Tariff order based on Applicant's filing, benchmarking, approved cost by the Commission in past and any other factor the Commission feels appropriate.

65 Where,

66 'K' is a constant (could be expressed in %). Value of K for each year of the Control Period shall be determined by the Commission in the MYT Tariff order based on Applicant's filing, benchmarking, approved cost by the Commission in past and any other factor considered appropriate by the Commission;

67 INDX - Inflation Factor to be used for indexing. Value of INDX shall be a combination of the Consumer Price Index (CPI) and the Wholesale Price Index (WPI) for immediately preceding five years before the base year;

68 The Applicant shall submit details of O&M expenses as required by the Commission. The O&M expenses for the Base Year shall be determined based on latest accounting statements, estimates of the generating company for relevant years and other factors considered relevant.

#### 69 New Generating Stations:

70 Normative O&M expenses (in Rs lakhs/ MW) permissible towards determination of tariff for each year of the Control Period shall be as follows:

## (i) Coal based Thermal Power Stations:

Year	200/ 210/ 250 MW sets	300/330/350 MW sets	500 MW sets	500 MW and above sets
2012-13	21.51	18.91	15.36	13.82
2013-14	22.74	19.99	16.24	14.62
2014-15	24.04	21.13	17.17	15.45

## (ii)

Provided that the above norms shall be multiplied by the following factors for additional units in respective unit sizes for the units whose COD occurs on or after 1.4.2012 in the same station:

200/210/250 MW	Additional 5th & 6th units	0.9
	Additional 7th & more units	0.85
300/330/350 MW	Additional 4th & 5th units	0.9
	Additional 6th & more units	0.85
500 MW and above	Additional 3rd & 4th units	0.9
	Additional 5th & above units	0.85

## (iii) Open Cycle Gas Turbine / Combined Cycle generating Stations (Rs in lakh/MW):

Year	Gas Turbine/ generating stations gas turbine power generating stations	Combined Cycle other than small stations	Small gas turbine power generating stations
2012-13	17.49		27.06
2013-14	18.49		28.61
2014-15	19.55		30.24

71 In case of coal-based thermal generating station a separate compensation allowance unit-wise shall be admissible to meet expenses on new assets of capital nature including in the nature of minor assets, in the following manner from the year following the year of completion of 10, 15, or 20 years of useful life:

Years of operation	Compensation Allowance (Rs. Lakh/MW/year)
0-10	Nil
11-15	0.15
16-20	0.35
21-25	0.65

**Expenses on secondary fuel oil consumption**

72 Expenses on secondary fuel oil in Rupees shall be computed corresponding to normative secondary fuel oil consumption (SFC) specified in clause A7:9 of these Regulations, in accordance with the following formula:

73 
$$= \text{SFC} \times \text{LPSFi} \times \text{NAPAF} \times 24 \times \text{NDY} \times \text{IC} \times 10$$

74 Where,

75 SFC – Normative Specific Fuel Oil consumption in ml/kWh

76 LPSFi – Weighted Average Landed Price of Secondary Fuel in Rs./ml considered initially

77 NAPAF – Normative Annual Plant Availability Factor in percentage

78 NDY – Number of days in a year

79 IC - Installed Capacity in MW

80 Initially, the landed cost incurred by the generating company on secondary fuel oil shall be taken based on actuals of the weighted average price of the three preceding months and in the absence of landed costs for the three preceding months, latest procurement price for the generating station, before the start of the year.

81 The secondary fuel oil expenses shall be subject to fuel price adjustment at the end of the each year of Control Period as per following formula:

$$\text{SFC} \times \text{NAPAF} \times 24 \times \text{NDY} \times \text{IC} \times 10 \times (\text{LPSFy} - \text{LPSFi})$$

Where,

LPSFy = The weighted average landed price of secondary fuel oil for the year in Rs. /ml

82 The savings on account of secondary fuel oil consumption in relation to norms specified in clause A7:9 of these Regulations, shall be shared with beneficiaries in the ratio of 50:50, in accordance with the following formula at the end of the year:

$$(\text{SFC} \times \text{NAPAF} \times 24 \times \text{NDY} \times \text{IC} \times 10 - \text{ACsfoy}) \times \text{LPSFy} \times 0.5$$

84 Where,

85 ACsfoy = Actual consumption of secondary fuel oil during the year in ml

#### A7: THERMAL POWER GENERATING STATIONS

##### Operational Norms

1 The values for different operational norms for the existing generating plants have been decided, considering the vintage and current operations of these plants as under:

##### 2 Indraprastha Power Generation Co. Ltd

##### 3 1) Rajghat Thermal Power House (RPH)

Parameters	2012-13	2013-14	2014-15
Normative Annual Plant Availability Factor (%)	75%	75%	75%
Gross Station Heat Rate (kCal/kWh)	3200	3200	3200
Auxiliary Consumption (%)	11.28%	11.28%	11.28%
Secondary Fuel Oil (LDO) Consumption (ml/kWh)	1.50	1.50	1.50
Secondary Fuel Oil (LSHS) Consumption (gm/kWh)	3.75	3.75	3.75

4

##### 5 2) Indraprastha Gas Turbine Power Station (IP GTPS)

Parameters	2012-13	2013-14	2014-15
Normative Annual Plant Availability Factor (%)	80%	80%	80%
Combined cycle Gross Station Heat Rate (kCal/kWh)	2450	2450	2450
Open Cycle Gross Station Heat Rate (kCal/kWh)	3125	3125	3125
Combined Cycle Auxiliary Consumption (%)	3.0%	3.0%	3.0%
Open Cycle Auxiliary Consumption (%)	1.0%	1.0%	1.0%

##### 6 Pragati Power Corporation Limited (PPCL)

##### 7 Pragati Power Station

Parameters	2012-13	2013-14	2014-15
Normative Annual Plant Availability Factor (%)	85%	85%	85%
Combined Cycle Gross Station Heat Rate (kCal/kWh)	2000	2000	2000
Open Cycle Gross Station Heat Rate (kCal/kWh)	2900	2900	2900
Combined Cycle Auxiliary Consumption (%)	3.0%	3.0%	3.0%
Open Cycle Auxiliary Consumption (%)	1.0%	1.0%	1.0%

8 The Commission may modify these norms of operations after considering the capital investments approved for any Renovation and Modernisation activities in these plants.

9 The norms of operation for generating stations other than existing stations shall be as under:

10 Normative Annual Plant Availability Factor (NAPAF): All thermal generating stations, NAPAF shall be 85%.

##### 11 Gross Station Heat Rate:

(i) Coal-based Thermal Generating Stations =  $1.065 \times \text{Design Heat Rate (kCal/kWh)}$

(ii) 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.

(iii) 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 <sup>2</sup> )	150	170	170	247	247
SHT/RHT (OC)	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

(iv) 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;

(v) 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;

(vi) Provided also that if one or more units were declared under commercial operation prior to 1.4.2012, the heat rate norms for those units as well as units declared under commercial operation on or after 1.4.2012 shall be lower of the heat rate norms arrived at by above methodology and the norms as per clause 1 of these Regulations;

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

(viii) Gas-based / Liquid-based thermal generating unit(s)/ block(s)

(ix) = 1.05 X Design Heat Rate of the unit/block for Natural Gas and RLNG (kCal/kWh)

= 1.071 X Design Heat Rate of the unit/block 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 block shall mean the guaranteed heat rate for a block at 100% MCR, site ambient conditions, zero percent make up, design cooling water temperature/back pressure.

Secondary Fuel Oil Consumption for Coal based generating stations 1.0 ml/kWh.

Auxiliary Energy Consumption:

(a) Coal-based generating stations

200 MW series	With Natural Draft cooling Tower or without cooling towers	8.5 %
300/330/350/500 MW and above – Steam driven Boiler Feed Pumps	With Natural Draft cooling Tower or without cooling towers	6.0%
300/330/350/500 MW and above – Electrically driven Boiler Feed Pumps	With Natural Draft cooling Tower or without cooling towers	8.5%

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

(b) Gas-based and Naphtha-based generating stations

Combined cycle	3.0%
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Open cycle

1.0%

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

13 The Commission may prescribe relaxed operational norms including the norms of Normative Annual Plant Availability Factor contained in these Regulations for a generating station, and these relaxed norms shall be applicable for determination of tariff for such generating station during the Control Period.

14 The norms of operation specified under these Regulations are the ceiling norms and shall not preclude the generating company and the beneficiaries from agreeing to the improved norms of operation and in case improved norms are agreed to, such improved norms shall be applicable for determination of tariff.

15 Provided if PPA stipulates better norms of operation then such norms provided in the PPA shall be considered for determination of tariff.

16 In case of renovation and modernisation, derating and rerating of the generating station, norms of operation shall be reviewed and modified accordingly.

#### Components of Tariff

17 The tariff for sale of electricity from a thermal or gas based generating station shall comprise of two parts, namely, the recovery of annual capacity (fixed) charge and energy (variable) charge.

18 The fixed cost of a generating station eligible for recovery through capacity charge shall include the following elements:

- (a) Operation and Maintenance Expenses;
  - (i) Depreciation;
  - (ii) Interest on loans;
  - (iii) Cost of secondary fuel oil (for coal based stations only)
  - (iv) Interest on working capital;
  - (v) Return on Equity;
  - (vi) Income Tax; and
  - (vii) Special allowance in lieu of R&M or separate compensation allowance, wherever applicable.

19 The energy (variable) charge shall cover fuel costs.

#### Recovery of Capacity Charge

20 The fixed cost of a thermal generating station shall be computed on annual basis, based on norms specified under these Regulations, and recovered on monthly basis under capacity charge. The total capacity charge payable for a generating station shall be shared by its beneficiaries as per their respective percentage share / allocation in the capacity of the generating station.

21 Full Capacity Charges shall be recoverable at Normative Annual Plant Availability Factor (NAPAF) specified in clause 1.9 of these Regulations. Recovery of Capacity Charges below the level of Normative Annual Plant Availability Factor (NAPAF) shall be on a pro-rata basis. At zero availability, no Capacity Charges shall be payable.

22 The capacity charge (inclusive of incentive) payable to a thermal generating station for a calendar month shall be calculated in accordance with the following formulae:

- (a) Generating stations in commercial operation for less than ten (10) years on 1st April of the financial year:

23  $(AFC \times (NDM / NDY) \times (0.5 + 0.5 \times PAFM / NAPAF))$  (in Rupees);

24 Provided that in case the plant availability factor achieved during a financial year (PAFY) is less than 70%, the total capacity charge for the year shall be restricted to:

25  $AFC \times (0.5 + 35 / NAPAF) \times (PAFY / 70)$  (in Rupees)

- (b) For generating stations in commercial operation for ten (10) years or more on 1st April of the year:

26  $(AFC \times (NDM / NDY) \times (PAFM / NAPAF))$  (in Rupees)

27 Where,

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

29 NAPAF = Normative annual plant availability factor in percentage

30 NDM = Number of days in the month

31 NDY = Number of days in the year

32 PAFM = Plant availability factor achieved during the month, in percent;

33 PAFY = Plant availability factor achieved during the year, in percent

34 The PAFM and PAFY shall be computed in accordance with the following formula:

35  $PAFM \text{ or } PAFY = 10000 \times \frac{\sum_{i=1}^N DC_i}{\{N \times IC \times (100 - AUX)\}} \%$

36 Where,

37 AUX = Normative auxiliary energy consumption in percentage.

38  $DC_i$  = Average declared capacity (in ex-bus MW), subject to clause 42 of these Regulations, for the  $i_{th}$  day of the period i.e. the month or the year as the case may be, as certified by the concerned Load Dispatch Centre after the day is over.

39 IC = Installed Capacity (in MW) of the generating station

40 N = Number of days during the period i.e. the month or the year as the case may be.

41 Note:  $DC_i$  and IC shall exclude the capacity of generating units not declared under commercial operation. In case of a change in IC during the concerned period, its average value shall be taken.

42 In case of fuel shortage in a thermal generating station, the generating company may propose to deliver a higher MW during peak-load hours by saving fuel during off-peak hours. The State Load Despatch Centre may then specify a pragmatic day-ahead schedule for the generating station to optimally utilize its MW and energy capability, in consultation with the beneficiaries.  $DC_i$  in such an event shall be taken to be equal to the maximum peak-hour ex-power plant MW schedule specified by the State Load Despatch Centre for that day.

#### Energy Charge

43 The energy (variable) charge shall cover main fuel costs and shall be payable by every beneficiary for the total energy scheduled to be supplied to such beneficiary during the calendar month on ex-power plant basis, at the specified energy charge rate of the month (with fuel price adjustment).

44 Total Energy charge payable to the generating company for a month shall be:

45 (Energy charge rate in Rs./kWh)  $\times$  {Scheduled energy (ex-bus) for the month in kWh.}

46 Energy charge rate (ECR) in Rupees per kWh on ex-power plant basis shall be determined to three decimal places in accordance with the following formulae:

(a) For coal based stations

47 
$$ECR = (GHR - SFC \times CVSF) \times LPPF \times 100 / \{CVPF \times (100 - AUX)\}$$

(b) For gas and liquid fuel based stations

48 
$$ECR = GHR \times LPPF \times 100 / \{CVPF \times (100 - AUX)\}$$

49 Where,

50 AUX = Normative auxiliary energy consumption in percentage.

51 CVPF = Gross calorific value of primary fuel as fired, in kCal per kg, per litre or per standard cubic metre, as applicable.

52 CVSF = Calorific value of secondary fuel, in kCal per ml.

53 ECR = Energy charge rate, in Rupees per kWh sent out.

54 GHR = Gross station heat rate, in kCal per kWh.

55 LPPF = Weighted average landed price of primary fuel, in Rupees per kg, per litre or per standard cubic metre, as applicable, during the month.

56 SFC = Specific fuel oil consumption, in ml per kWh.

57 The landed cost of coal shall include:

(a) Base cost of coal;

(i) Royalty;

(ii) Taxes and duties;

(iii) Transport cost by rail / ocean / road / pipeline or any other means;

(iv) For the purpose of computing energy charges, landed cost of coal shall be arrived at after considering normative transit and handling loss of 0.8% on the quantity of coal dispatched by the coal supplier in case of non-pit-head stations and 0.2% on the quantity of coal dispatched by the fuel supplier in case of pit-head stations.

#### Incentive

58 In case of thermal generating stations incentive shall form part of the recovered Capacity (fixed) charges. No separate incentive shall be provided.

#### Unscheduled Interchange (UI) Charges

59 The generating station may be entitled to receive or shall be required to bear, as the case may be, the charges for deviations between energy sent-out corresponding to Scheduled Generation and actual energy sent-out, as per the rate approved by the Commission.

#### Deemed Generation

60 In the event of bottleneck in evacuation of power due to any constraint, outage, failure or limitation in the transmission system, associated switchyard and sub-stations owned by the Transmission Licensee, (certified by the State Load Despatch Centre) necessitating reduction in generation, the State Load Despatch Centre shall revise the schedule of generation.

#### Billing and payment of charges

61 Bills shall be raised for capacity charge and energy charge on monthly basis by the generating company in accordance with these Regulations, and payments shall be made by the beneficiaries directly to the generating company.

62 Payment of the capacity charge for a thermal generating station shall be shared by the beneficiaries of the generating station as per their percentage shares for the month (inclusive of any allocation out of the unallocated capacity) in the installed capacity of the generating station.

63

**Note 1**

Shares / allocations of each beneficiary in the total capacity of State generating stations shall be as determined by the State Government, inclusive of any allocation made out of the unallocated capacity. The shares shall be applied in percentages of installed capacity and shall normally remain constant during a month. The total capacity share of a beneficiary would be sum of its capacity share plus allocation out of the unallocated portion. In the absence of any specific allocation of unallocated power by the State Government, the unallocated power shall be added to the allocated shares in the same proportion as the allocated shares.

**Note 2**

The beneficiaries may propose surrendering part of their allocated firm share to other beneficiaries. In such cases, the shares of the beneficiaries may be prospectively reallocated by the State Government for a specific period (in complete months) from the beginning of a calendar month. When such re-allocations are made, the beneficiaries who surrender the share shall not be liable to pay Capacity Charges for the surrendered share. The Capacity Charges for the capacity surrendered and reallocated as above shall be paid by the beneficiary to whom the surrendered capacity is allocated. Except for the period of reallocation of capacity as above, the beneficiaries of the generating station shall continue to pay the full Capacity Charges as per allocated capacity shares. Any such reallocation and its reversion shall be communicated and notified by the SLDC in advance, at least three (3) days prior to such reallocation or reversion taking effect

**Late Payment Surcharge**

64 In case the payment of any bill for charges payable under these Regulations is delayed by a beneficiary beyond a period of 60 days from the date of billing a late payment surcharge at the rate of 1.25% per month shall be levied by the generating company

**Rebate**

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

**Safety Standards**

66 The generating company shall develop a Safety Manual and follow procedures to maintain minimum safety standards during construction, operation, etc. in line with the provisions of Section 53 of the Act.

**A8: MULTI YEAR TARIFF FILING PROCEDURE**

1 The Multi Year Tariff filing shall be in such form and in such manner as may be decided by the Commission and as per the provisions of Conduct of Business Regulations.

2 The Applicant shall also submit the Multi Year Tariff filing in electronic format to the Commission.

**Business Plan Filings**

3 The generating company shall file for the Commission's approval, on 1st April of the year preceding the first year of the Control Period or any other date as may be directed by the Commission, a Business Plan approved by the Board of Directors. The Business Plan shall be for the entire Control Period and shall, inter alia, contain

- (i) Capital Investment Plan: This shall include details of the investments planned by the generating company, along with the corresponding capitalisation schedule and financing plan. This plan shall be commensurate with capacity enhancement and proposed efficiency improvements for various plants of the company and shall include cost benefit analysis;
- (ii) Capital Structure: The generating company shall submit plant-wise details of the capital structure and cost of financing (interest on debt) and return on equity, after considering the existing market conditions, terms of the existing loan agreements, risks associated in generation business and creditworthiness;
- (iii) Operation and Maintenance (O&M) expenses: This shall include the costs estimated for the Base Year, the actual expenses incurred in the previous two years and the projected values for each year of the Control Period based on the proposed norms for O&M cost, including indexation and other appropriate mechanisms;
- (iv) Depreciation: This shall include details of depreciation based on the fair life of the asset and capitalisation schedules for each year of the Control Period;
- (v) Performance Targets: A set of targets proposed for other controllable items such as NPAF, Station Heat Rate, Secondary Fuel Oil Consumption, and Auxiliary Power Consumption. The targets shall be consistent with the Capital Investment Plan proposed by the generating company;

- (vi) Other Information: This shall include any other details considered appropriate by the generating company for consideration during determination of tariff.

#### **Tariff Filing**

4 For existing stations, the generating company shall make an application consistent with the Business Plan, not less than 120 days before the commencement of the first year of the Control Period or such other date as may be directed by the Commission as per these regulations, for determination of tariff based on capital expenditure incurred duly certified by the auditors or projected to be incurred up to the date of commercial operation and additional capital expenditure incurred duly certified by the auditors or projected to be incurred during the Control Period of the generating station. For the new stations, the generating company shall make an application consistent with the Business Plan as per these regulations, for determination of tariff based on capital expenditure incurred duly certified by the auditors or projected to be incurred up to the date of commercial operation and additional capital expenditure incurred duly certified by the auditors or projected to be incurred during the Control Period of the generating station projected to be completed within six months from the date of application:

5 Provided that in case of an existing project, the application shall be based on admitted capital cost including any additional capitalization already admitted up to 31.3.2012 and estimated additional capital expenditure for the respective years of the Control Period 2012-15:

6 Provided further that application shall contain details of underlying assumptions for projected capital cost and additional capital expenditure, where applicable.

7 In case of the existing projects, the generating company shall continue to provisionally bill beneficiaries with the tariff approved by the Commission and applicable as on 31.3.2012 for the period starting from 1.4.2012 till approval of tariff by the Commission in accordance these regulations:

8 Provided that where the tariff provisionally billed exceeds or falls short of the final tariff approved by the Commission under these regulations, the generating company shall refund to or recover from the beneficiaries within six months along with simple interest at the rate equal to Base Rate of State Bank of India plus 150 basis points on the 1st April of the concerned/respective year.

9 The Applicant shall file the application for approval of Generation Tariff for each year of the Control Period consistent with the Business Plan, not less than 120 days before the commencement of the first year of the Control Period or such other date as may be directed by the Commission.

#### **Annual Performance Review (APR) during the Control Period**

10 The Applicant shall submit information as part of annual review on actual performance to assess its performance vis-à-vis performance targets approved by the Commission at the beginning of the Control Period. The Applicant shall submit information on performance on controllable parameters (NAPAF, Station Heat Rate, Secondary Fuel Oil Consumption, Auxiliary Power Consumption, O&M Expenses, capital investment, capitalisation, depreciation, RoCE, etc).

11 The Applicant shall submit the revised ARR and corresponding tariff adjustments 120 days before the commencement of the Financial Year. The revised estimates shall be required because of trued-up costs on account of depreciation, Return on Capital Employed, incentive mechanism for exceeding the targets and implementation of performance framework for quality of supply targets as per the prescribed formats.

12 The generating company shall submit details of capital expenditure and additional capital expenditure incurred during the period under review, duly audited and certified by the auditors.

13 Where after the truing up the tariff recovered exceeds the tariff approved by the Commission under these regulations the generating company shall refund to the beneficiaries excess amount so recovered along with simple interest at the rate equal to Base Rate of State Bank of India plus 150 basis points as on 1st April of the respective year.

14 Where after the truing up the tariff recovered is less than the tariff approved by the Commission under these regulations the generating company shall recover from the beneficiaries under-recovered amount along with simple interest at the rate equal to the Base Rate of State Bank of India plus 150 basis points as on 1st April of the respective year.

15 The amount under-recovered or over-recovered, along with simple interest at the rate equal to the Base Rate of State Bank of India plus 150 basis points as on 1st April of the respective year, shall be recovered or refunded by the generating company in six equal monthly installments starting within three months from the date of the tariff order issued by the Commission after the truing up exercise.

#### **Review at the end of the Control Period**

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



17 The end of the second Control Period shall be the beginning of the third Control Period and the generating company shall follow the same procedure unless required otherwise by the Commission. The Commission shall analyse the performance of the generating company with respect to the targets set out at the beginning of the second Control Period and based on the actual performance, expected efficiency improvements and other factors prevalent, determine the initial values for the next Control Period.

**A9: DISPOSAL OF APPLICATION**

1 The Commission shall process the filings made by the generating company in accordance with these Regulations and the Conduct of Business Regulations.

2 Based on the generating company's filings, objections/ suggestions from public and other stakeholders, the Commission may accept the application with such modifications and/or such conditions as may be deemed just and appropriate and issue, within 120 days of the receipt of the application and after considering all suggestions and objections from public and other stakeholders, an Order containing inter alia targets for controllable items and the generation tariffs for each year of the Control Period.

**A10: PERIODIC REVIEWS**

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

2 The generating company shall submit information as part of annual performance review on actual performance for assessment the performance vis-à-vis the targets approved by the Commission at the beginning of the Control Period. This shall include annual statements of its performance and accounts including latest available audited accounts as well as the regulatory accounts in the prescribed formats, norms achieved and the tariff worked out in accordance with these Regulations.

3 The Commission may also direct any modifications to the forecast of the generating company for the remainder of the Control Period, with detailed reasons for the same.

**A11: MISCELLANEOUS**

**Sharing of Clean Development Mechanism (CDM) Benefits**

1 The proceeds of carbon credit from approved CDM project shall be shared in the following manner, namely:-

- (i) 100% of the gross proceeds on account of CDM to be retained by the project developer in the first year (12 months) after the date of commercial operation of the generating station;
- (ii) in the second year, the share of the beneficiaries shall be 10% which shall be progressively increased by 10% every year till it reaches 50%, whereafter the proceeds shall be shared in equal proportion, by the generating company and the users.

**Foreign Exchange Rate Variation**

2 The generating company may hedge foreign exchange exposure in respect of the interest on foreign currency loan and repayment of foreign loan acquired for the generating station in part or full in the discretion of the generating company.

3 The generating company shall recover the cost of hedging of foreign exchange rate variation corresponding to the normative foreign debt, in the relevant year on year-to-year basis as expense in the period in which it arises and extra rupee liability corresponding to such foreign exchange rate variation shall not be allowed against the hedged foreign debt.

4 To the extent the generating company is not able to hedge the foreign exchange exposure, the extra rupee liability towards interest payment and loan repayment corresponding to the normative foreign currency loan in the relevant year shall be permissible provided it is not attributable to the generating company or its suppliers or contractors.

5 The generating company shall recover the cost of hedging and foreign exchange rate variation on year-to-year basis as income or expense in the period in which it arises.

**Recovery of cost of hedging Foreign Exchange Rate Variation**

6 Recovery of cost of hedging and foreign exchange rate variation shall be made directly by the generating company from the users without making any application before the Commission:

7 Provided that in case of any objections by the users to the amounts claimed on account of cost of hedging or foreign exchange rate variation, the generating company may make an appropriate application before the Commission for its decision.

**Issue of Orders and Practice Directions**

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

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

**Powers to remove difficulties**

10 If any difficulty arises in giving effect to any of the provisions of these Regulations, the Commission may, by a general or special order, not being inconsistent with the provisions of these Regulations or the Act, do or undertake to do things or direct the generating company to do or undertake such things which appear to be necessary or expedient for the purpose of removing the difficulties.

**Power of Relaxation**

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

**Interpretation**

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

**Saving of Inherent Powers of the Commission**

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

**Enquiry and Investigation**

14 All enquiries, investigations and adjudications under these Regulations shall be done by the Commission through the proceedings in accordance with the provisions of the Conduct of Business Regulations.

**Power to Amend**

15 The Commission, for reasons to be recorded in writing, may at any time vary, alter or modify any of the provision of these Regulations by amendment.

JAYSHREE RAGHURAMAN  
SECRETARY

**Appendix-I: Depreciation Schedule**

S. No	Asset Particulars	Depreciation Rate (Salvage value=10%)
		SLM
A	Land owned under full ownership	0.00%
B	Land under lease	
(a)	For investment in land	3.34%
(b)	For cost of clearing site	3.34%
C	Assets Purchased New	
a.	PI & machinery in generating stations	
(i)	Hydro-electric	5.28%
(ii)	Steam-electric NHRB & Waste Heat Recovery Boilers	5.28%
(iii)	Diesel electric & gas plant	5.28%
b.	Cooling towers and circulating water systems	5.28%
c.	Hydraulic works forming part of hydro-electric system including:	
(i)	Dams, spillways weirs, canals, reinforced concrete flumes & syphons	5.28%
(ii)	Reinforced concrete pipelines and surge tanks, steel pipelines, sluice gates, steel surge (tanks) hydraulic control valves and hydraulic works	5.28%
d.	Building & civil engineering works of a permanent character, not mentioned above:	
(i)	Offices & showrooms	3.34%
(ii)	Containing thermo-electric generating plant	3.34%
(iii)	Containing hydro-electric generating plant	3.34%

S. No	Asset Particulars	Depreciation Rate (Salvage value=10%)
(iv)	Temporary erection such as wooden structures	100.00%
(v)	Roads other than kutchra roads	3.34%
(vi)	Others	3.34%
e.	Transformers, 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 condenser	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 cable support	
(i)	Lines on fabricated steel operating at terminal voltages higher than 66 kV	5.28%
(ii)	Lines on steel supports operating at terminal voltages higher than 13.2 kV but not exceeding 66 kV	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:	
(i)	Static	5.28%
(ii)	Portable	9.50%
m.		
(i)	Office furniture and furnishings	6.33%
(ii)	Office equipments	6.33%
(iii)	Internal wirings 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	

S. No	Asset Particulars	Depreciation Rate (Salvage value=10%)
(i)	Radio and higher frequency carrier systems	6.33%
(ii)	Telephone lines and telephones	6.33%
p.	IT Equipments	15.00%
q.	Any other assets not covered above	5.28%

### Delhi Electricity Regulatory Commission

#### Regulations on Terms & Conditions for Determination of Transmission Tariff

No. F. 3(290)/Tariff/DERC/2011-12/C.F. 3180 – The Commission having deliberated on the draft Delhi Electricity Regulatory Commission (Terms and Conditions for Determination of Transmission Tariff) Regulations 2011 and after having considered the responses received from various stakeholders and in exercise of powers vested under the Electricity Act, 2003, hereby approves the Delhi Electricity Regulatory Commission (Terms & Conditions for Determination of Transmission Tariff) Regulations, 2011.

#### A1: SHORT TITLE AND EXTENT

- 1 These Regulations shall be called the Delhi Electricity Regulatory Commission (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2011.
- 2 These Regulations shall come into force on April 1, 2012 and unless reviewed earlier or extended by the Commission shall remain in force for a period of three year from the date of commencement.
- 3 These Regulations shall extend to the whole of National Capital Territory of Delhi.

#### A2: DEFINITIONS AND INTERPRETATION

- 1 In these Regulations, unless the context otherwise requires -

- (i) “Act” means the Electricity Act, 2003 (36 of 2003), including amendments thereto;
- (ii) “Aggregate Revenue Requirement” or “ARR” means for each Financial Year, the costs pertaining to the Licensed Business which are permitted, in accordance with these Regulations, to be recovered from the tariffs and charges determined by the Commission;
- (iii) “Allotted Transmission Capacity” means and include the power transfer in MW between the specified point(s) of injection and point(s) of drawal allowed to a long-term customer on the intra-state transmission system under the normal circumstances and the expression “allotment of capacity” shall be construed accordingly;

Allotted Transmission Capacity to a Long Term Transmission Customer shall be sum of the generating capacities allocated to the Long Term Transmission Customer from the State Generating Stations and Inter State Generating Stations and the contracted power, if any;

- (iv) “Applicant” means a Transmission Licensee who has made an application for determination of transmission charge in accordance with these Regulations and includes a Transmission Licensee whose tariff is the subject of a review by the Commission;
- (v) “Auditor” means an auditor appointed by the transmission licensee, in accordance with the provisions of sections 224, and 619 of the Companies Act, 1956 (1 of 1956), or any other law for the time being in force;
- (vi) “Availability” in relation to a transmission system for a given period means the time in hours during that period in which the transmission system is capable to transmit electricity at its Rated Voltage and shall be expressed in percentage of total hours in the given period, and shall be calculated as directed by the Commission;
- (vii) “Base Year” means the Financial Year immediately preceding first year of the Control Period;
- (viii) “Beneficiary (ies)” means both Long Term Transmission Customers and Long Term Open Access Customers. A Distribution Licensee shall necessarily be a Long Term Transmission Customer for which he shall be required to enter into a Transmission Services Agreement with the Transmission Licensee;
- (ix) “CERC” means the Central Electricity Regulatory Commission;
- (x) “Change in Law” means occurrence of any of the following events:



- (iv) the enactment, bringing into effect, adoption, promulgation, amendment, modification or repeal of any law; or
- (v) change in interpretation of any law by a competent court, Tribunal or Indian Governmental Instrumentality which is the final authority under law for such interpretation; or
- (vi) change by any competent statutory authority, in any consent, approval or licence available or obtained for the project.
- (xi) **"Commission"** means the Delhi Electricity Regulatory Commission;
- (xii) **"Conduct of Business Regulations"** means the Delhi Electricity Regulatory Commission Comprehensive (Conduct of Business) Regulations, 2001, as amended from time to time;
- (xiii) **"Control Period"** means a multi-year period fixed by the Commission, from 1st April 2012 and up to 31st March 2015;
- (xiv) **"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;
- (xv) **"Date of Commercial Operation" or 'COD'** means:
  - (xvi) in relation to the transmission system, the date declared by the transmission licensee from 0000 hour of which an element of the transmission system is in regular service after successful charging and trial operation;
  - (xvii) Provided that the date shall be the first day of a calendar month and transmission charge for the element shall be payable and its availability shall be accounted for, from that date;
  - (xviii) Provided further that in case an element of the transmission system is ready for regular service but is prevented from providing such service for reasons not attributable to the transmission licensee, its suppliers or contractors, the Commission may approve the date of commercial operation prior to the element coming into regular service;
- (xix) **"Distribution Licensee"** means a Licensee authorized to operate and maintain a distribution system for supplying electricity to the consumers in his area of supply;
- (xx) **"Expenditure Incurred"** means the fund, whether the equity or debt or both, actually deployed and paid in cash or cash equivalent, for creation or acquisition of a useful asset and does not include commitments or liabilities for which no payment has been released;
- (xxi) **"Financial Year"** means a period commencing on 1st April of a calendar year and ending on 31<sup>st</sup> March of the subsequent calendar year;
- (xxii) **"Implementation Agreement"** means the agreement, contract or memorandum of understanding, or any such covenant, entered into between the transmission licensee and the long-term transmission customer for construction of the transmission system;
- (xxiii) **"License"** means a License granted by the Commission under Section 14 of the Act;
- (xxiv) **"Licensed Business"** means the functions and activities, which the Licensee is required to undertake in terms of the License granted by the Commission or as a deemed Licensee under the Act;
- (xxv) **"Licensee"** means a person who has been granted a Licence and shall include a deemed Licensee;
- (xxvi) **"Long-Term Transmission Customer"** means a person having contractual right to use the intra-state transmission system for a period of twelve years or more and less than twenty five years by paying transmission charges;
- (xxvii) **"Medium-term Transmission Customer"** means a person having contractual right to use the intra-state transmission system for a period exceeding three months and less than three years by paying transmission charges;
- (xxviii) **"Non-Tariff Income"** means income relating to the Licensed Business other than from tariff (intra-state transmission of electricity), and excluding any income from Other Business;
- (xxix) **"Other Business"** means other business of the Transmission Licensee under section 41 of the Electricity Act 2003;
- (xxx) **"Open Access Customer"** means a consumer permitted by the Commission to receive supply of electricity from a person, other than Distribution Licensee of his

- area of supply, and the expression includes a generating company and a Licensee, who has availed of or intends to avail of open access;
- (xxxi) **"Original project cost"** means the capital expenditure incurred by the transmission licensee, within the original scope of the project up to the cut-off date as admitted by the Commission;
- (xxxii) **"Project"** means the transmission system;
- (xxxiii) **"Rated Voltage"** means the manufacturer's design voltage at which the transmission system is designed to operate and includes such lower voltage at which any transmission line is charged or for the time being charged, in consultation with long-term transmission customers;
- (xxxiv) **"Short-term Transmission Customer"** means a person having contractual right to use the intra-state transmission system for a period up to 1 month by paying transmission charges;
- (xxxv) **"State Load Despatch Centre"** or 'SLDC' means the centre established by the State Government for purposes of exercising the powers and discharging the functions under Section 31 of the Act;
- (xxxvi) **"State"** means the National Capital Territory of Delhi;
- (xxxvii) **"Transmission Business"** means the business of transmission of electricity by a Transmission Licensee to a Beneficiary/(ies) and permitted open access customers;
- (xxxviii) **"Transmission Service Agreement"** means the agreement, contract, memorandum of understanding, or any such covenant, entered into between the transmission licensee and the Long-Term Transmission Customer(s) for the operation phase of Transmission System;
- (xxxix) **"Transmission System"** means the system consisting mainly of extra high voltage electric lines and associated equipments and substations having design voltage higher than 66 KV including any other system of lower voltage as the Transfer Scheme or the Commission may specifically recognise, owned or controlled by the Transmission Licensee, and used for the purposes of the transportation of electricity between the switchyards of two Generating Stations or from the switchyard of a Generating Station to a substation, or between substations, or to or from any external interconnection and includes all bays/equipment up to the interconnection with the Distribution System, and any plant, apparatus and meters owned or used in connection with the transmission of electricity, but shall not include any part of a Distribution System.
- (xl) **"Transmission System Availability Factor"** means Availability of the Transmission System as certified by the State Load Despatch Centre;
- (xli) **"Useful life"** in relation to a unit of a Transmission System from the COD shall mean 25 years for sub-station and 35 years for transmission line;

2 Words and expressions used in these Regulations and not defined herein but defined in the Act shall have meaning assigned to them under the Act.

3 All proceedings under these Regulations shall be governed by the Conduct of Business Regulations.

#### **A3: SCOPE OF REGULATIONS AND EXTENT OF APPLICATION**

1 Subject to the provisions of the Act, Rules and Policies, these Regulations shall apply in all cases of determination of Transmission Tariff under Section 62 of the Act. It shall however, not apply in the case where tariff has been determined through a transparent process of bidding in accordance with the guidelines issued by the Central Government as per the provisions of Section 63 of the Act.

2 In accordance with the principles laid out in these Regulations, the Commission shall determine the Aggregate Revenue Requirement (ARR) for the Transmission Business.

#### **A4: GENERAL APPROACH AND GUIDING PRINCIPLES**

1 The Commission shall adopt Multi Year Tariff Framework for approval of ARR and expected revenue from tariffs and charges.

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

- (i) Business Plan of the Transmission Licensee for the entire Control Period to be submitted to the Commission for approval, prior to the start of the Control Period;
- (ii) Trajectory for specific parameters shall be stipulated by the Commission, where the performance of the Applicant is sought to be improved through incentives and disincentives;
- (iii) Annual review of performance shall be conducted vis-à-vis the approved forecast.

#### **Baseline**

3 The baseline values (operating and cost parameters) for the Control Period shall be determined by the Commission and based on the approved values by the Commission in the past, latest audited accounts, estimate of the actuals for the relevant year, prudence check and other factors considered appropriate by the Commission.

4 The Commission shall normally not revisit the performance targets.

#### **Capital Investment Plan**

5 The Commission shall approve the system augmentation plan submitted by the Transmission Licensee, based on the load growth forecast during the Control Period. The same would be considered for computation of ARR, wherein the amount of electricity transmitted by the Transmission System shall be projected considering the estimated growth plan of its Beneficiaries and any plans of new transmission system, based on network expansion plans within the State.

6 Capital investment plan submitted by the Licensee shall also provide details of ongoing projects that will spill into the Control Period and new projects that will commence during the Control Period but may extend beyond the Control Period.

7 The capital investment plan shall be in conformity with the plans made by the CEA/CTU/STU. The investment plan shall be scheme-wise and each scheme shall include:

- (i) Purpose of investment (i.e. replacement of existing assets, meeting load growth, technical loss reduction, meeting reactive energy requirements, improvement in quality and reliability of supply, etc) ;
- (ii) Capital Structure;
- (iii) Capitalization Schedule;
- (iv) Financing Plan;
- (v) Cost-benefit analysis;
- (vi) Performance improvement envisaged in the Control Period.

8 For the Annual Performance Review, Transmission Licensee shall submit the actual capital expenditure incurred and capitalisation during the year under review along with the Annual Performance Review Filing.

9 The Commission shall review actual capital expenditure incurred and capitalisation at the end of each year of the Control Period vis-à-vis the approved capital expenditure and capitalisation schedule. Based on trued up capital expenditure and capitalisation, the Commission shall true up Return on Capital Employed (RoCE) and depreciation while truing up for any year of the Control Period. The Commission may also revise the capital expenditure and capitalisation for remaining years of the Control Period based on trued up capital expenditure and capitalisation for any year.

10 Capital expenditure shall normally be incurred by the Licensee after the approval of the Commission.

11 The Licensee shall quarterly submit the details of the scheme-wise asset capitalisation along with receipt of the Electrical Inspector certificate and other documents as may be prescribed by the Commission from time to time for allowing Return on Capital Employed and Depreciation.

#### **Renovation and Modernisation**

12 The Transmission Licensee for meeting the expenditure on Renovation and Modernization (R&M) for the purpose of extension of life beyond the useful life of the Transmission System, 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 including foreign exchange component, if any, consent of beneficiaries and any other information considered to be relevant by the Transmission Licensee.

13 Where the Transmission Licensee makes an application for approval of R&M proposal, the approval shall be granted after due consideration of reasonableness of the cost estimates, financing plan, schedule of completion, interest during construction, use of efficient technology, cost-benefit analysis, and such other factors as may be considered relevant by the Commission.

14 Any expenditure incurred or projected to be incurred as admitted by the Commission after prudent check based on the estimates of Renovation and Modernization expenditure and life extension, and after writing off the original amount of the replaced assets and deducting the accumulated depreciation including advance against depreciation already recovered from the Original project cost, shall form the basis for determination of Tariff.

#### **Targets for Controllable parameters**

15 The Commission shall set targets for the items or parameters that are deemed to be "controllable" and which include:

- (i) Availability of the Transmission System;
- (ii) Operation and Maintenance Expenditure which includes employee expenses, repairs and maintenance expenses, administration and general expenses and other miscellaneous expenses viz. audit fees, rents, legal fees etc;
- (iii) Return on Capital Employed; and
- (iv) Depreciation.

#### **Truing Up**

16 For controllable parameters,

- (i) Any surplus or deficit on account of Operation and Maintenance (O&M) expenses shall be to the account of the Licensee and shall not be trued up in ARR; and

- (ii) Depreciation and Return on Capital Employed shall be trued up every year based on the actual capital expenditure and actual capitalisation vis-à-vis capital investment plan (capital expenditure and capitalisation) approved by the Commission:

Provided that any surplus or deficit in Working Capital shall be to the account of the Licensee and shall not be trued up in ARR:

- (iii) Provided further that the Commission shall not true up the interest rate, if variation in State Bank of India Base Rate as on April 1, 2012, is within +/- 1% during the Control Period. Any increase / decrease in State Bank of India Base Rate beyond +/- 1% only shall be trued up.

#### **A5: PRINCIPLES FOR DETERMINATION OF ARR**

1 The Transmission Licensee shall segregate its business into Transmission Business and SLDC activity. The Transmission Business revenue requirement would be used for determining non-discriminatory transmission charges.

2 Till such time there is a complete segregation of accounts between Transmission Business and SLDC activity, the ARR for each business shall be supported by an Allocation Statement containing the apportionment of all costs, revenues, assets, liabilities, reserves and provisions between the Transmission Business, SLDC activity and any Other Business of the Transmission Licensee. The Allocation Statement shall also contain the methodology used for the apportionment between different businesses.

#### **Operational Norms**

3 The Commission shall specify suitable norms of operation for the Transmission Licensee in the Multi Year Tariff Order, based on the submission of the Business Plans. The parameter which shall be considered would cover, among others:

- (i) Normative Annual Transmission System Availability Factor (NATAF): The Target Availability for recovery of full annual transmission charges during the Control Period shall be as under:  
 (ii) AC system: 98.0%  
 (iii) Recovery of full annual transmission charges below the target availability shall be on a *pro rata* basis.

#### **ARR for Transmission Business**

4 The Aggregate Revenue Requirement for the Transmission Business for each year of the Control Period shall contain the following items:

- (i) Operation and Maintenance expenses;  
 (ii) Return on Capital Employed;  
 (iii) Depreciation;  
 (iv) Income Tax;  
 (v) Less: Non-Tariff Income ; and  
 (vi) Less: Income from Other Business.

#### **Operation and Maintenance Expenses**

5 Normative Operation and Maintenance (O&M) expenses shall include:

- (i) Salaries, wages, pension contribution and other employee costs;  
 (ii) Administrative and General expenses which shall also include expense related to raising of loans;  
 (iii) Repairs and Maintenance;  
 (iv) Expenses related to auxiliary energy consumption in the sub-station for the purpose of air-conditioning, lighting, technical consumption, etc.; and  
 (v) Other miscellaneous expenses, statutory levies and taxes (except corporate income tax).

6 The Licensee shall submit the O&M expenses for the Control Period as prescribed in multiyear tariff filing procedure. The O&M expenses for the Base Year shall be approved by the Commission taking into account the latest available audited accounts, business plan filed by the Licensees, estimates of the actuals for the Base Year, prudence check and any other factor considered appropriate by the Commission.

7 O&M expenses permissible towards ARR for each year of the Control Period shall be determined using the formula detailed below:

- (i)  $O\&M_n = (R\&M_n + EMP_n + A\&G_n) * (1 - X_n)$   
 (ii) Where,

$$R\&M_n = K * GFA_{n-1};$$

$$EMP_n + A\&G_n = (EMP_{n-1} + A\&G_{n-1}) * (INDX); \text{ and}$$

$$INDX = 0.55 * CPI + 0.45 * WPI$$

$EMP_n$  – Employee Costs of the Licensee for the  $n^{th}$  year;

$A\&G_n$  – Administrative and General Costs of the Licensee for the  $n^{th}$  year;

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



$X_n$  is an efficiency factor for  $n^{\text{th}}$  year. Value of  $X_n$  shall be determined by the Commission in the MYT Tariff order based on Licensee's filing, benchmarking, approved cost by the Commission in past and any other factor the Commission feels appropriate.

8

Where,

- (i) 'K' is a constant (could be expressed in %). Value of K for each year of the Control Period shall be determined by the Commission in the MYT Tariff order based on Licensee's filing, benchmarking, approved cost by the Commission in past and any other factor considered appropriate by the Commission;
- (ii) INDX - Inflation Factor to be used for indexing. Value of INDX shall be a combination of the Consumer Price Index (CPI) and the Wholesale Price Index (WPI) for immediately preceding five years before the base year;

#### Return on Capital Employed

9 Return on Capital Employed (RoCE) shall be used to provide a return to the Transmission Licensee, and shall cover all financing costs and taxes, without providing separate allowances for interest on loans and interest on working capital.

10 The Regulated Rate Base (RRB) shall be used to calculate the total capital employed which shall include the original cost of assets and working capital, less the accumulated depreciation. Capital work in progress (CWIP) shall not form part of the RRB. Capital subsidies / grants shall be deducted in arriving at the RRB.

11 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 and normative working capital.

12 The Regulated Rate Base for the  $i^{\text{th}}$  year of the Control Period shall be computed in the following manner:

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

Where,

'i' is the  $i^{\text{th}}$  year of the Control Period,  $i = 1, 2, 3, 4$  for the first Control Period;

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

$\Delta AB_i$ : Change in the Regulated Rate Base in the  $i^{\text{th}}$  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 is arrived at as follows:

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

Where,

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

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

$CC_i$ : Consumer Contributions, capital subsidy / grant pertaining to the  $\Delta AB_i$  and capital grants/subsidies received during  $i^{\text{th}}$  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  $i^{\text{th}}$  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;

$OCFA_0$ : Original Cost of Fixed Assets at the end of the Base Year available for use and necessary for the purpose of the Licenced Business;

$AD_0$ : 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;

$CC_0$ : Total contributions pertaining to the  $OCFA_0$ , made by the consumers, capital subsidy / grants towards the cost of construction of Transmission System by the Transmission Licensee and also includes the capital grants/subsidies received for this purpose;

$\Delta WC_i$ : Change in normative working capital requirement in the  $i^{\text{th}}$  year of the Control Period, from the  $(i-1)^{\text{th}}$  year. For the first year of the Control Period ( $i=1$ ),  $\Delta WC_1$  shall be taken as the normative working capital requirement of the first year. Working capital for wheeling of electricity shall consist of

- (i) Receivables for two months towards transmission tariffs calculated on NATAF;
- (ii) Maintenance spares @ 15% of operation and maintenance expenses; and
- (iii) Operation and maintenance expenses for one month.

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

Where,

$WACC_i$  is the Weighted Average Cost of Capital for each year of the Control period;

$$RoCE = WACC_i * RRB_i$$

RRBi - Regulated Rate Base is the asset base for each year of the Control Period based on the capital investment plan and working capital.

14 The WACC for each year of the Control Period shall be computed at the start of the Control Period in the following manner:

Where,

$$WACC = \left[ \frac{D/E}{1 + D/E} \right] * r_d + \left[ \frac{1}{1 + D/E} \right] * r_e$$

D/E is the Debt to Equity Ratio and for the purpose of determination of tariff, debt-equity ratio for the asset capitalized shall be 70:30. Where equity employed is in excess of 30%, the amount of equity for the purpose of tariff shall be limited to 30% and the balance amount shall be considered as notional loan. The interest rate on the amount of equity in excess of 30% treated as notional loan shall be the weighted average rate of the loans of the Licensee for the respective years and shall be further limited to the prescribed rate of return on equity in the Regulations. Where actual equity employed is less than 30%, the actual equity and debt shall be considered:

Provided that the Working capital shall be considered 100% debt financed for the calculation of WACC;

Provided further that the Debt to Equity Ratio for the assets covered under Transfer Scheme, dated July 1, 2002 shall be considered as per the debt and equity in the transfer scheme;

Provided further that Debt to Equity Ratio for the assets capitalised till 1.04.2012 (other than assets covered under Transfer Scheme) shall be considered as per the debt and equity approved by the Commission at the time of capitalization.

$r_d$  is the Cost of Debt and shall be determined at the beginning of the Control Period after considering Transmission Licensee's proposals, present cost of debt already contracted by the Transmission Licensee, credit rating, benchmarking and other relevant factors (risk free returns, risk premium, prime lending rate etc.).

$r_e$  is the Return on Equity and shall be considered at 14% post tax for the transmission business.

15 The repayment of loans for the year of the tariff period 2012-15 shall be deemed to be equal to the depreciation allowed for that year.

16 Notwithstanding any moratorium period availed by the Transmission Licensee, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the annual depreciation allowed.

#### Depreciation

17 Depreciation shall be calculated for each year of the Control Period, on the amount of Original Cost of the Fixed Assets considered for calculation of the Regulated Rate Base of the corresponding year.

(i) Provided that depreciation shall not be allowed on assets funded by any capital subsidy / grant. Provision for replacement of such assets shall be made in the Capital Investment plan; Provided further that the Licensee shall submit yearwise details of assets retired and disposed off, which shall be removed from the Original Cost of Fixed Assets;

Provided further that assets shall normally be not retired before completion of the useful life and the Licensee shall take prior approval of the Commission in case of retiring any asset before its useful life;

(ii) Provided further that the Licensee shall submit year-wise details of the assets which have completed its useful life.

18 Depreciation for each year of the Control Period shall be determined based on the methodology as specified in these Regulations along with the rates and other terms specified in Appendix -I to these Regulations.

19 The residual value of assets shall be considered as 10% and depreciation shall be allowed to a maximum of 90% of the original cost of the asset. Land is not a depreciable asset and its cost shall be excluded while computing 90% of the original cost of the asset:

Provided that if the Licensee is recovering less than residual value on disposing any retired assets, it shall take prior approval of the Commission before disposing such asset.

5.2 Depreciation shall be calculated annually, based on the straight line method, over the useful life of the asset. The base value for the purpose of depreciation shall be original cost of the asset.

Provided that, the remaining depreciable value as on 31<sup>st</sup> March of the year closing after a period of 12 years from the Date of Commercial Operation shall be spread over the balance useful life of the assets.



1 In case of the existing Projects, the balance depreciable value as on 1.4.2012 shall be worked out by deducting the cumulative depreciation including Advance Against Depreciation as admitted by the Commission upto 31.3.2012 from the gross depreciable value of the assets. The rate of Depreciation shall be continued to be charged at the rate specified in Appendix-I of these Regulations till cumulative depreciation reaches 70%. Thereafter, the remaining depreciable value shall be spread over the remaining life of the asset such that the maximum depreciation does not exceed 90%.

2 Depreciation shall be charged from the first year of operation of the asset. In case, of commercial operation of the asset for part of the year, depreciation shall be charged on a pro rata basis.

#### **Tax on Income**

3 Tax on the income streams of the Transmission Licensee shall be recovered from the beneficiaries. Tax on income, if any, liable to be paid shall be limited to tax on return on the equity component of capital employed. Any additional tax liability on account of incentive due to improved performance like higher availability, lower O&M Expenses etc and other income shall not be considered:

4 Provided that the deferred tax liability, excluding Fringe Benefit Tax, for the period up to 31st March, 2012 whenever it materializes, shall be recoverable directly from the beneficiaries and the long-term customers.

5 The actual assessment of income tax should take into account benefits of tax holiday, and the credit for carry forward losses applicable as per the provisions of the Income Tax Act 1961 shall be passed on to the consumers.

#### **Non-Tariff Income**

6 All incomes being incidental to electricity business and derived by the Licensee from sources, including but not limited to profit derived from disposal of assets, rents, delayed payment surcharge and miscellaneous receipts from the Beneficiaries shall constitute Non-Tariff Income of the Licensee.

7 The amount received by the Licensee on account of Non-Tariff Income shall be deducted from the Aggregate Revenue Requirement in calculating the net revenue requirement of such Licensee.

#### **Other Income of the Transmission Licensee**

8 Where the Transmission Licensee is engaged in any other business, the income from such business shall be calculated as per "DERC Treatment of Income from Other Business of Transmission Licensee and Distribution Licensee Regulation 2005" and shall be deducted from the Aggregate Revenue Requirement in calculating the revenue requirement of the Transmission Licensee;

9 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 as approved by the Board of Directors to the Commission along with his application for determination of tariff;

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

#### **Late Payment Surcharge**

11 In case the payment of any bills for charges payable under these Regulations is delayed by a beneficiary beyond a period of 60 days from the date of billing a late payment surcharge at the rate of 1.25% per month shall be levied by the Transmission Licensee.

#### **Rebate**

12 For payment of bills of the Transmission Licensee through a letter of credit on presentation, a rebate of 2% shall be allowed. If the payment is made by any other mode but within a period of one month of presentation of bills by the Transmission Licensee, a rebate of 1% shall be allowed.

#### **Quality of Supply**

13 The Commission shall monitor the following Quality of Supply parameters during the Control Period:

- (i) Transmission System Availability
- (ii) Transformer Failure, across various capacities which represents the number of transformer failures as a percentage of the total number of transformers in that specified capacity within the Transmission System, over a specified period of time.

14 The Transmission Licensee in its Business Plan filings shall submit and propose the trajectory for the achievement of quality targets. The Commission shall specify the targets for each parameter. The Transmission Licensee shall submit its performance on each parameter in the form and manner specified by the Commission.

#### **Safety Standards**

15 The Transmission Licensee shall develop a Safety Manual and follow procedures to maintain atleast minimum safety standards during construction, operation, etc. in line with the provisions of Section 53 of the Act.

#### **A6: PRINCIPLES FOR DETERMINATION OF TARIFF**

1 The Licensee shall keep in view the following principles while filing application for transmission tariff.

**Separation of Transmission and SLDC functions**

2 The Transmission Licensee shall separate its business into transmission and SLDC functions, and segregate its accounts between these two businesses. Till the segregation of the accounts is completed, the Transmission Licensee shall submit an Allocation Statement that contains the apportionment of costs and revenues to that business. The Allocation Statement, approved by the Board of Directors of the Licensee, shall be accompanied with an explanation of the methodology for apportionment which should be consistent over the Control Period.

**Transmission Tariff**

3 The Transmission Tariff payable by the Beneficiaries of the Transmission System shall be designed to recover the Aggregate Revenue Requirement approved by the Commission for each year of the Control Period.

4 In addition to transmission tariff, charges for reactive energy as may be specified by the Commission in the MYT order shall also be payable by all the Beneficiaries of the system.

**SLDC Charges**

5 SLDC charges shall be payable by various utilities as may be determined by the Commission.

**Annual Transmission Service Charge**

6 The fixed cost of the transmission system shall be computed on annual basis, in accordance with norms contained in these regulations, aggregated as appropriate, and recovered on monthly basis as transmission charge from the users.

7 The transmission charge (inclusive of incentive) payable for a calendar month for a transmission system or part thereof shall be

8  $ARR \times (NDM / NDY) \times (TAFM / NATAF)$

9 Where,

10  $ARR$  = Aggregate Revenue Requirement specified for the year, in Rupees;

11  $NATAF$  = Normative annual transmission availability factor, in per cent specified in clause A5:3(i) of these Regulations;

12  $NDM$  = Number of days in the month;

13  $NDY$  = Number of days in the year; and

14  $TAFM$  = Transmission system availability factor for the month, in Percent, computed in accordance with Appendix -II to these Regulations.

15 The Transmission Licensee shall raise the bill for the transmission charge (inclusive of incentive) for a month based on its estimate of  $TAFM$ . Adjustments, if any, shall be made on the basis of the  $TAFM$  to be certified by the SLDC within 30 days from the last day of the relevant month.

**Allocation of Transmission Service Charge**

16 The Annual Transmission Service Charge (ATSC) shall be shared between the long and medium term customers of the transmission system on monthly basis based on the allotted transmission capacity or contracted capacity, as the case may be.

17 Transmission charges corresponding to any plant capacity for which a Beneficiary has not been identified and contracted shall be paid by the concerned generating company.

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

19 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.

20 For short term bilateral transactions and short term collective transactions through power exchanges, the transmission tariff shall be denominated in Rs/kWh/hr.

21 25% of the charges collected from the short term open access customer shall be retained by the transmission licensee and the balance 75% shall be considered as non-tariff income and adjusted towards reduction in the transmission service charges payable by the long term and medium term users.

22 Notwithstanding anything contained in these regulations, the Commission after conducting study and due regulatory process may notify the revised sharing and recovery of annual transmission service charge of the transmission licensee.

**Truing Up Mechanism**

23 Truing-up shall be carried out in accordance with Regulation A4:16, for each year based on the actual/audited information and prudence check by the Commission;

(i) Provided that if such variations are large, and it is not feasible to recover in one year alone, the Commission may take a view to create a regulatory asset, as per the guidelines provided in clause 8.2.2 of the National Tariff Policy.

(ii) Provided further that under business as usual conditions, the Commission, to ensure tariff stability, may include the opening balances of uncovered gap / trued-up costs in the subsequent Control Period's ARR instead of including in the year succeeding the relevant year of the control period after providing for transition financing arrangement or capital restructuring.

**A7: MULTI YEAR TARIFF FILING PROCEDURE**

1 The Multi Year Tariff filing shall be in such form and in such manner as may be decided by the Commission and as per the provisions of Conduct of Business Regulations.



2 The Transmission Licensee shall also submit the Multi Year Tariff filing in electronic format to the Commission.

#### **Multi-Year Filings for the Control Period**

##### **Business Plan Filings**

3 The Transmission Licensee shall file for the Commission's approval, on 1st April of the year preceding the first year of the Control Period or any other date as may be directed by the Commission, a Business Plan approved by the Board of Directors. The Business Plan shall be for the entire Control Period and shall, inter alia, contain;

- (i) Capital Investment Plan: This should be commensurate with load growth and quality improvement proposed in the Business Plan. The investment plan should also include corresponding capitalisation schedule and financing plan;
- (ii) The appropriate capital structure and cost of financing (interest on debt) and return on equity, terms of the existing loan agreements, etc;
- (iii) Operation and Maintenance (O&M) expenses: This shall include the costs estimated for the Base Year, the actual expenses incurred in the previous control period and the projected values for each year of the Control Period based on the proposed norms for O&M cost, including indexation and other appropriate mechanisms;
- (iv) Depreciation: Based on the fair life of the asset and capitalisation schedules for each year of the Control Period;
- (v) Performance Targets: A set of targets proposed for controllable items such as Availability of transmission system, transformer failure rate, and any other parameters for quality of supply. The targets shall be consistent with the Capital Investment Plan proposed by the Transmission Licensee;
- (vi) Proposals for Non-Tariff Income with item-wise description and details;
- (vii) Proposals in respect of income from Other Business;
- (viii) Other Information: This shall include any other details considered appropriate by the Transmission Licensee for consideration during determination of tariff; and
- (ix) SLDC Charges.

##### **Tariff Filing**

4 The Transmission Licensee shall file an application for approval of Transmission Tariff for each year of the Control Period, not less than 120 days before the commencement of the first year of the Control Period or such other date as may be directed by the Commission.

5 The filings for Transmission Tariff shall contain the following:

- (i) The Transmission System or network usage forecast for each year of the Control Period, consistent with the Business Plan;
- (ii) Proposals for transmission tariff design for each year of the Control Period, including the losses to be charged and the procedure thereof;
- (iii) Proposal for transmission tariff rate for the each year of the Control Period supported by adequate justification;
- (iv) Proposal for reactive energy charges;
- (v) Proposal for SLDC charges; and
- (vi) Expected Revenue from the Licensed Business, Non-Tariff Income and income from Other Business and other matters considered appropriate by the Transmission Licensee.

6 The Transmission Licensee shall continue to provisionally bill beneficiaries with the tariff approved by the Commission and applicable as on 31.3.2012 for the period starting from 1.4.2012 till approval of tariff by the Commission in accordance these regulations:

7 Provided that where the tariff provisionally billed exceeds or falls short of the final tariff approved by the Commission under these regulations, the Transmission Licensee shall refund to or recover from the beneficiaries within six months along with simple interest at the rate equal to Base Rate of State Bank of India plus 150 basis points on the 1st April of the concerned/respective year.

##### **Annual Performance Review (APR) during the Control Period**

8 The Transmission Licensee shall submit information as part of annual review on actual performance to assess its performance vis-à-vis performance targets approved by the Commission at the beginning of the Control Period. The Licensee shall submit information on performance on uncontrollable parameters (Non-Tariff Income) and controllable parameters (O&M Expenses, capital investment, capitalisation, depreciation, RoCE, etc).

9 The Licensee shall submit the revised ARR and corresponding tariff adjustments 120 days before the commencement of the Financial Year. The revised estimates shall be required because of trued-up costs on account of depreciation, Return on Capital Employed, incentive mechanism for exceeding the targets and implementation of performance framework for quality of supply targets as per the prescribed formats.

10 The Licensee shall submit details of capital expenditure and additional capital expenditure incurred during the period under review, duly audited and certified by the auditors.

11 Where after the truing up the tariff recovered exceeds the tariff approved by the Commission under these regulations the Licensee shall refund to the beneficiaries excess amount so recovered along with simple interest at the rate equal to Base Rate of State Bank of India plus 150 basis points as on 1st April of the respective year.

12 Where after the truing up the tariff recovered is less than the tariff approved by the Commission under these regulations the Licensee shall recover from the beneficiaries under-recovered amount along with simple interest at the rate equal to the Base Rate of State Bank of India plus 150 basis points as on 1st April of the respective year.

13 The amount under-recovered or over-recovered, along with simple interest at the rate equal to the Base Rate of State Bank of India plus 150 basis points as on 1st April of the respective year, shall be recovered or refunded by the Licensee in six equal monthly installments starting within three months from the date of the tariff order issued by the Commission after the truing up exercise.

#### **Review at the end of the Control Period**

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

15 The end of the second Control Period shall be the beginning of the third Control Period and the Licensee shall follow the same procedure unless required otherwise by the Commission. The Commission shall analyse the performance of the Licensee with respect to the targets set out at the beginning of the second Control Period and based on the actual performance, expected efficiency improvements and other factors prevalent, determine the initial values for the next Control Period.

#### **A8: DISPOSAL OF APPLICATION**

1 The Commission shall process the filings made by the Transmission Licensee in accordance with these Regulations and the Conduct of Business Regulations.

2 Based on the Transmission Licensees' filings, objections/ suggestions from public and other stakeholders, the Commission may accept an application with such modifications and/or such conditions as may be deemed just and appropriate and issue, within 120 days of the receipt of the application and considering all suggestions and objections from public and other stakeholders, an Order containing inter alia targets for controllable items and the approved Aggregate Revenue Requirement for the Transmission Business for each year of the Control Period.

#### **A9: PERIODIC REVIEWS**

1 To ensure smooth implementation of the Multi Year Tariff (MYT) framework, the Commission may undertake periodic reviews of Transmission Licensees' performance during the Control Period, to address any practical issues, concerns or unexpected outcomes that may arise.

2 The Transmission Licensee shall submit information as part of annual performance review on actual performance to assess the performance vis-à-vis the targets approved by the Commission at the beginning of the Control Period. This shall include annual statements of its performance and accounts including latest available audited accounts as well as the regulatory accounts in the prescribed formats and the tariff worked out in accordance with these Regulations.

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

4 The Commission may also direct any modifications to the forecast of the Transmission Licensee for the remainder of the Control Period, with detailed reasons for the same.

#### **A10: MISCELLANEOUS**

##### **Sharing of Clean Development Mechanism (CDM) Benefits**

1 The proceeds of carbon credit from approved CDM project shall be shared in the following manner, namely:-

- (i) 100% of the gross proceeds on account of CDM to be retained by the project developer in the first year (12 months) after the date of commercial operation of the transmission system;
- (ii) in the second year, the share of the beneficiaries shall be 10% which shall be progressively increased by 10% every year till it reaches 50%, whereafter the proceeds shall be shared in equal proportion, by the transmission licensee and the users.



**Foreign Exchange Rate Variation**

2 The Transmission Licensee may hedge foreign exchange exposure in respect of the interest on foreign currency loan and repayment of foreign loan acquired for the transmission system in part or full in the discretion of the Transmission Licensee.

3 The Transmission Licensee shall recover the cost of hedging of foreign exchange rate variation corresponding to the normative foreign debt, in the relevant year on year-to-year basis as expense in the period in which it arises and extra rupee liability corresponding to such foreign exchange rate variation shall not be allowed against the hedged foreign debt.

4 To the extent the Transmission Licensee is not able to hedge the foreign exchange exposure, the extra rupee liability towards interest payment and loan repayment corresponding to the normative foreign currency loan in the relevant year shall be permissible provided it is not attributable to the Transmission Licensee or its suppliers or contractors.

5 The Transmission Licensee shall recover the cost of hedging and foreign exchange rate variation on year-to-year basis as income or expense in the period in which it arises.

**Recovery of cost of hedging Foreign Exchange Rate Variation**

6 Recovery of cost of hedging and foreign exchange rate variation shall be made directly by the Transmission Licensee from the users without making any application before the Commission:

7 Provided that in case of any objections by the users to the amounts claimed on account of cost of hedging or foreign exchange rate variation, the Transmission Licensee may make an appropriate application before the Commission for its decision.

**Issue of Orders and Practice Directions**

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

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

**Powers to remove difficulties**

10 If any difficulty arises in giving effect to any of the provisions of these Regulations, the Commission may, by a general or special order, not being inconsistent with the provisions of these Regulations or the Act, do or undertake to do things or direct the Licensee to do or undertake such things which appear to be necessary or expedient for the purpose of removing the difficulties.

**Power of Relaxation**

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

**Interpretation**

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

**Saving of Inherent Powers of the Commission**

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

**Enquiry and Investigation**

14 All enquiries, investigations and adjudications under these Regulations shall be done by the Commission through the proceedings in accordance with the provisions of the Conduct of Business Regulations.

**Power to Amend**

15 The Commission, for reasons to be recorded in writing, may at any time vary, alter or modify any of the provision of these Regulations by amendment.

JAYSHREE RAGHURAMAN  
SECRETARY

**Appendix-I: Depreciation Schedule**

S. No	Asset Particulars	Depreciation Rate (Salvage value=10%)
		SLM
A	Land owned under full ownership	0.00%
B	Land under lease	
(a)	For investment in land	3.34%

S. No	Asset Particulars	Depreciation Rate (Salvage value=10%)
(b)	For cost of clearing site	3.34%
C	Assets Purchased New	
a.	PI & machinery in generating stations	
(i)	Hydro-electric	5.28%
(ii)	Steam-electric NHRB & Waste Heat Recovery Boilers	5.28%
(iii)	Diesel electric & gas plant	5.28%
b.	Cooling towers and circulating water systems	5.28%
c.	Hydraulic works forming part of hydro-electric system including:	
(i)	Dams, spillways weirs, canals, reinforced concrete flumes & syphons	5.28%
(ii)	Reinforced concrete pipelines and surge tanks, steel pipelines, sluice gates, steel surge (tanks) hydraulic control valves and hydraulic works	5.28%
d.	Building & civil engineering works of a permanent character, not mentioned above:	
(i)	Offices & showrooms	3.34%
(ii)	Containing thermo-electric generating plant	3.34%
(iii)	Containing hydro-electric generating plant	3.34%
(iv)	Temporary erection such as wooden structures	100.00%
(v)	Roads other than kutcha roads	3.34%
(vi)	Others	3.34%
e.	Transformers, 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 condenser	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 cable support	
(i)	Lines on fabricated steel operating at terminal voltages higher than 66 kV	5.28%
(ii)	Lines on steel supports operating at terminal voltages higher than 13.2 kV but not exceeding 66 kV	5.28%



S. No	Asset Particulars	Depreciation Rate (Salvage value=10%)
(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:	
(i)	Static	5.28%
(ii)	Portable	9.50%
m.		
(i)	Office furniture and furnishings	6.33%
(ii)	Office equipments	6.33%
(iii)	Internal wirings 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 higher frequency carrier systems	6.33%
(ii)	Telephone lines and telephones	6.33%
p.	IT Equipments	15.00%
q.	Any other assets not covered above	5.28%

#### Appendix-II: Procedure for Calculation of Transmission System Availability Factor for a Month

1. Transmission system Availability factor for a calendar month (TAFM) shall be calculated by the respective Transmission Licensee, got verified and certified by the SLDC and separately for each AC transmission system and grouped according to sharing of transmission charges.
2. TAFM, in percent, shall be equal to  $(100 - 100 \times \text{NAFM})$ , where NAFM is the non-availability factor in per unit for the month, for the transmission system / subsystem.
3. NAFM for A.C. systems / sub-systems shall be calculated as follows :

$$\text{NAFM} = \left[ \sum_{l=1}^L (\text{OH } l \times \text{Ckt. km } l \times \text{NSC } l) + \sum_{t=1}^T (\text{OH } t \times \text{MVA } t \times 2.5) + \sum_{r=1}^R (\text{OH } r \times \text{MVAR } r \times 4) \right] / \text{THM} \times \left[ \sum_{l=1}^L (\text{Ckt. km } l \times \text{NSC } l) + \sum_{t=1}^T (\text{MVA } t \times 2.5) + \sum_{r=1}^R (\text{MVAR } r \times 4) \right]$$

Where,

l identifies a transmission line circuit;

t identifies a transformer / Inter connecting transformer (ICT);

r identifies a bus reactor, switchable line reactor or Static VAR Compensation(SVC);

L = total number of line circuits;

T = total number of transformers and ICTs;

R = total number of bus reactors, switchable line reactors and SVCs;

OH = Outage hours or hours of non-availability in the month, excluding the duration of outages not attributable to the Transmission Licensee, if any, as per clause 5;

Ckt. km = Length of a transmission line circuit in km;

NSC = Number of sub-conductors per phase;

MVA = MVA rating of a transformer / ICT;

MVAR = MVAR rating of a bus reactor, switchable line reactor or an SVC (in which case it would be the sum of inductive and capacitive capabilities);

THM = Total hours in the month;

4. The transmission elements under outage due to following reasons shall be deemed to be available:
  - (a) Shut down availed for maintenance or construction of elements of another transmission scheme. If the other transmission scheme belongs to the Transmission Licensee, the SLDC may restrict the deemed availability period to that considered reasonable by him for the work involved.
  - (b) Switching off of a transmission line to restrict over voltage and manual tripping of switched reactors as per the directions of SLDC.
5. Outage time of transmission elements for the following contingencies shall be excluded from the total time of the element under period of consideration.
  - (a) Outage of elements due to acts of God and force majeure events beyond the control of the Transmission Licensee. However, onus of satisfying the SLDC that element outage was due to aforesaid events and not due to design failure shall rest with the Transmission Licensee. A reasonable restoration time for the element shall be considered by SLDC 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. SLDC may consult the Transmission Licensee or any expert for estimation of reasonable restoration time. Circuits restored through ERS (Emergency Restoration System) shall be considered as available.
  - (b) 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, and tripping of lines, ICTs, etc. due to grid disturbance. However, if the element is not restored on receipt of direction from SLDC while normalizing the system following grid incident/disturbance within reasonable time, the element shall be considered not available for the period of outage after issuance of SLDC's direction for restoration.

### **Delhi Electricity Regulatory Commission**

#### **Regulations on Terms & Conditions for Determination of Wheeling Tariff & Retail Supply**

No. F. 3(290)/Tariff/DERC/2011-12/C.F. 3180 – The Commission having deliberated on the draft Delhi Electricity Regulatory Commission (Terms and Conditions for Determination of Wheeling Tariff and Retail Supply Tariff) Regulations 2011 and after having considered the responses received from various stakeholders and in exercise of powers vested under the Electricity Act, 2003, hereby approves the Delhi Electricity Regulatory Commission (Terms & Conditions for Determination of Wheeling Tariff and Retail Supply Tariff) Regulations, 2011.

#### **A1: SHORT TITLE, COMMENCEMENT AND EXTENT**

- 1 These Regulations shall be called the Delhi Electricity Regulatory Commission (Terms and Conditions for Determination of Wheeling Tariff and Retail Supply Tariff) Regulations, 2011.
- 2 These Regulations shall come into force on April 1, 2012 and unless reviewed earlier or extended by the Commission shall remain in force for a period of three year from the date of commencement.
- 3 These Regulations shall extend to the whole of National Capital Territory of Delhi.

#### **A2: DEFINITIONS AND INTERPRETATION**

- 1 In these Regulations, unless the context otherwise requires-
  - (i) "Act" means the Electricity Act, 2003 (36 of 2003), including amendments thereto;
  - (ii) "Aggregate Revenue Requirement" or "ARR" means for each Financial Year, the costs pertaining to the Licensed business which are permitted, in accordance with these Regulations, to be recovered from the tariffs and charges determined by the Commission;
  - (iii) "Allocation Statement" means for each Financial Year, a statement in respect of each of the businesses (Wheeling, Retail Supply, Other Business) of the Licensee, showing the amounts of any revenue, cost, asset, liability, reserve or provision etc, which has been either;
 

**Determined** by apportionment or allocation between different businesses of the Licensee including the Licensed Business, together with a description of the basis of the apportionment or allocation; or

**Charged** from or to each such Other Business together with a description of the basis of that charge;

- (iv) **"Base Year"** means the Financial Year immediately preceding first year of the Control Period;
- (v) **"Commission"** means the Delhi Electricity Regulatory Commission;
- (vi) **"Conduct of Business Regulations"** means the Delhi Electricity Regulatory Commission Comprehensive (Conduct of Business) Regulations, 2001, as amended from time to time;
- (vii) **"Control Period"** means a multi-year period fixed by the Commission, from 1st April 2012 and up to 31st March 2015;
- (viii) **"Financial Year"** means a period commencing on 1st April of a calendar year and ending on 31st March of the subsequent calendar year;
- (ix) **"Licence"** means a Licence granted under Section 14 of the Act;
- (x) **"Licensed Business"** shall mean the functions and activities, which the Licensee is required to undertake in terms of the Licence granted or being a deemed Licensee under the Act;
- (xi) **"Licensee"** means a person who has been granted a Licence and shall include a deemed Licensee;
- (xii) **"Non-Tariff Income"** means income relating to the Licensed business other than from tariff (Wheeling and Retail Supply), and excluding any income from Other Business, cross-subsidy surcharge and additional surcharge;
- (xiii) **"Other Business"** means other businesses of the Distribution Licensee under section 51 of the Electricity Act 2003;
- (xiv) **"Retail Supply Business"** means the business of sale of electricity by a Distribution Licensee to the category of consumers within its area of supply in accordance with the terms of the Licence for distribution and retail supply of electricity;
- (xv) **"Retail Supply Tariff"** is the tariff charged by the Distribution Licensee for supply to its Customers other than open access consumer which includes charges for Wheeling and Retail Supply;
- (xvi) **"Trading Business"** means the business of purchase of electricity by the Distribution Licensee for resale of electricity to other Licensee or consumers or category of consumers outside the area of supply of the Distribution Licensee;
- (xvii) **"Wheeling"** means the operation whereby the distribution system and associated facilities of a Distribution Licensee, are used by another person for the conveyance of electricity on payment of charges to be determined under section 62;
- (xviii) **"Wheeling Business"** means the business of operating and maintaining a distribution system for conveyance of electricity in the area of supply of the Distribution Licensee.

2 Words and expressions used in these Regulations and not defined herein but defined in the Act shall have meaning assigned to them under the Act.

3 All proceedings under these Regulations shall be governed by the Conduct of Business Regulations.

### A3: SCOPE OF REGULATIONS AND EXTENT OF APPLICATION

1 In accordance with the principles laid out in these Regulations, the Commission shall determine the tariff for –

- (i) Wheeling of electricity, i.e. Wheeling Tariff;
- (ii) Retail sale of electricity, i.e. Retail Supply Tariff;
- (iii) Provided that in case of distribution of electricity in the same area by two or more Distribution Licensees, the Commission may, for promoting competition among Distribution Licensees, fix only maximum ceiling of tariff for retail sale of electricity;
- (iv) Provided further that where the Commission has permitted open access to any category of consumers under Section 42 of the Act, the Commission shall determine the Wheeling Tariff, cross-subsidy surcharge, additional surcharge and other open access related charges in accordance with these Regulations and Delhi Electricity Regulatory Commission (Terms and Conditions of Open Access) Regulations, 2005.

2 In accordance with the principles laid out in these Regulations, the Commission shall determine the Aggregate Revenue Requirement (ARR) and Tariff for

- (i) Wheeling Business; and
- (ii) Retail Supply Business.

3 The ARR determined for the Wheeling Business shall be used to fix the Wheeling Tariff for wheeling of electricity.

4 The ARR determined for Retail Supply Business shall be used to fix the Retail Supply Tariff for retail sale of electricity.

5 These Regulations shall apply to all the Distribution Licensees in the National Capital Territory of Delhi.

**A4: GENERAL APPROACH AND GUIDING PRINCIPLES**

1 The Commission shall adopt Multi Year Tariff framework for approval of ARR and expected revenue from tariffs and charges.

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

- (i) Business Plan of the Distribution Licensee for the entire Control Period to be submitted to the Commission for approval, prior to the start of the Control Period;
- (ii) Applicant's forecast of expected Wheeling Tariff and Retail Supply Tariff for each year of the Control Period, based on reasonable assumptions of the underlying financial and operational parameters, as submitted in the Business Plan;
- (iii) Trajectory for specific parameters shall be stipulated by the Commission, where the performance of the applicant is sought to be improved through incentives and disincentives;
- (iv) Annual review of performance shall be conducted based on the actual vis-à-vis the approved forecast and categorization of variations in performance into controllable factors and uncontrollable factors;
- (v) The Distribution Licensee's performance vis-à-vis the AT&C loss targets specified by the Commission shall be appropriately incentivise/penalise; and
- (vi) Variation in revenue / cost on account of uncontrollable factors like sales, power purchase and controllable factors - RoCE and Depreciation shall be trued up annually.

**Segregation of Wheeling and Retail Supply Business**

3 The Distribution Licensee shall segregate the accounts of the Licensed business into Wheeling Business and Retail Supply Business.

4 For such period until accounts are segregated, the Licensees shall prepare an Allocation Statement to apportion costs and revenues to respective business in accordance with the methodology prescribed in Appendix 2. The Allocation Statement along with the methodology which should be consistent over the Control Period, as approved by the Managing Director/CEO of the Licensee, shall be submitted for approval of the Commission.

**Baseline**

5 The baseline values (operating and cost parameters) for the Control Period shall be determined by the Commission and based on the approved values by the Commission in the past, latest audited accounts, estimate of the actuals for the relevant year, prudence check and other factors considered appropriate by the Commission.

6 The Commission shall normally not revisit the performance targets.

**Targets for Controllable Parameters**

7 The Commission shall set targets for each year of the Control Period for the items or parameters that are deemed to be "controllable" and which include:

- (i) AT&C Loss, which shall be measured as the difference between the units input into the distribution system for sale to all its consumer and the units realised wherein the units realised shall be equal to the product of units billed and collection efficiency:
  - (ii) Provided that units billed shall include the units realised on account of theft measured on actual basis i.e. number of units against which payment of theft billing has been realised;
- (iii) Distribution losses, which shall be measured as the difference between the net units input into the distribution system for sale to all its consumer and sum of the total energy billed in its Licence area in the same year;
- (iv) Collection efficiency, which shall be measured as ratio of total revenue realised to the total revenue billed in the same year:
  - (v) Provided that revenue realisation from electricity duty and late payment surcharge shall not be included for computation of collection efficiency;
- (vi) Operation and Maintenance Expenditure which includes employee expenses, repairs and maintenance expenses, administration and general expenses and other miscellaneous expenses viz. audit fees, rents, legal fees etc;
- (vii) Return on Capital Employed;
- (viii) Depreciation; and
- (ix) Quality of Supply.

8 The target AT&C loss levels to be achieved by each Distribution Licensee during each year of the Control Period shall be determined by the Commission based upon benchmarking, past trends, business plan submitted by the Distribution Licensee and any other factor considered relevant by the Commission.

(i) The Distribution Licensee will be eligible for incentive by the way of higher rate of Return on Equity (to be considered while calculating RoCE) as shown below for achieving lower AT&C loss level than specified in the loss reduction trajectory:

(ii) Additional Return on Equity (%) =  $(X_i - Y_i) / (X_{i-1} - X_i)$

(iii) Where,



- (iv)  $X_i$  = Target AT&C loss level for  $i^{\text{th}}$  year,
- (v)  $X_{i-1}$  = Target AT&C loss level for  $(i-1)^{\text{th}}$  year,
- (vi)  $Y_i$  = Actual AT&C Loss level for  $i^{\text{th}}$  year:
- (vii) Provided that any financial loss on account of under performance with respect to AT&C loss targets shall be to the Licensee's account.

#### Sales Forecast

9 The Licensee shall forecast sales for each customer category and sub-categories for each year of the Control Period in their filings, for the Commission's review and approval.

10 The Commission shall examine the forecasts for their reasonableness and consistency based on growth in the number of consumers, pattern of consumption, losses and demand of electricity in previous years and anticipated growth in the next year and any other factor, which the Commission may consider relevant and approve the sales forecast with such modifications as deemed fit for each year of the Control Period.

11 Sales shall be treated as uncontrollable.

12 Sale of electricity, if any, to electricity traders or other distribution Licensee(s) shall be separately indicated;

13 The distribution Licensee(s) shall also indicate category-wise open access customers and sales. The demand and energy wheeled for them shall be shown separately for:

- (i) Supply within its area of supply; and
- (ii) Supply outside its area of supply.

#### Capital Investment

14 The Commission shall approve capital investment plan of the Licensees for the Control Period commensurate with load growth, distribution loss reduction and quality improvement proposed in the Business Plan.

15 Capital investment plan submitted by the Licensee shall also provide details of ongoing projects that will spill into the Control Period and new projects that will commence during the Control Period but may extend beyond the Control Period.

16 The investment plan shall be zone-wise /scheme-wise and with respect to each zone/scheme, shall include:

- (i) Purpose of investment (i.e. replacement of existing assets, meeting load growth, technical loss reduction, non-technical loss reduction, meeting reactive energy requirements, customer service improvement, improvement in quality and reliability of supply, etc) ;
- (ii) Capital Structure;
- (iii) Capitalization Schedule;
- (iv) Financing Plan;
- (v) Cost-benefit analysis;
- (vi) Performance improvement envisaged in the Control Period.

17 The Commission shall review actual capital expenditure incurred and capitalisation at the end of each year of the Control Period vis-à-vis the approved capital expenditure and capitalisation schedule. Based on trued up capital expenditure and capitalisation, the Commission shall true up Return on Capital Employed (RoCE) and depreciation while truing up for any year of the Control Period. The Commission may also revise the capital expenditure and capitalisation for remaining years of the Control Period based on trued up capital expenditure and capitalisation for any year.

18 Capital expenditure shall normally be incurred by the Licensee after the approval of the Commission.

19 The Licensee shall quarterly submit the details of the scheme-wise asset capitalisation along with receipt of the Electrical Inspector certificate (wherever applicable) and other documents as may be prescribed by the Commission from time to time for allowing Return on Capital Employed and Depreciation.

#### Quality of Supply and Customer Service

20 The quality of supply and the customer service parameters shall be monitored as per the norms to be prescribed by the Commission separately from time to time. For certain parameters listed in clause A6:2, the Commission shall monitor Licensee's performance with respect to the targets specified.

#### True Up

21 The true up across various controllable and uncontrollable parameters shall be conducted as per principle stated below:

- (i) Variation in revenue / expenditure on account of uncontrollable sales / power purchase respectively shall be trued up every year;
- (ii) For controllable parameters,  
Any surplus or deficit on account of Operation and Maintenance (O&M) expenses shall be to the account of the Licensee and shall not be trued up in ARR; and  
Depreciation and Return on Capital Employed shall be trued up every year based on the actual capital expenditure and actual capitalisation vis-à-vis capital investment plan (capital expenditure and capitalisation) approved by the Commission:  
Provided that any surplus or deficit in Working Capital shall be to the account of the Licensee and shall not be trued up in ARR;

Provided further that the Commission shall not true up the interest rate, if variation in State Bank of India Base Rate as on April 1, 2012, is within +/- 1% during the Control Period. Any increase / decrease in State Bank of India Base Rate beyond +/- 1% only shall be trued up.

#### A5: PRINCIPLES FOR DETERMINATION OF ARR

##### ARR for Wheeling Business

1 The Aggregate Revenue Requirement for the Wheeling Business of the Distribution Licensees for each year of the Control Period, shall contain the following items;

- (i) Operation and Maintenance expenses;
- (ii) Return on Capital Employed;
- (iii) Depreciation;
- (iv) Income Tax;
- (v) Interest on Consumer Security Deposit;
- (vi) Less: Non-Tariff Income;
- (vii) Less: Income from Other Business; and
- (viii) Less: Income from wheeling of electricity.

##### ARR for Retail Supply Business

2 The Aggregate Revenue Requirement for the Retail Supply Business of the Distribution Licensee, for each year of the Control Period, shall contain the following items;

- (a) Cost of power procurement;
  - (i) Transmission & Load Dispatch charges;
  - (ii) Operation and Maintenance expenses;
  - (iii) Return on Capital Employed;
  - (iv) Depreciation;
  - (v) Income Tax;
  - (vi) Interest on Consumer Security Deposit;
  - (vii) Less: Non-Tariff Income;
  - (viii) Less: Income from Other Business; and
  - (ix) Less: Receipts on account of cross subsidy surcharge and additional surcharge from open access customers.

##### Operation and Maintenance Expenses

3 Operation and Maintenance (O&M) expenses shall include:

- (i) Salaries, wages, pension contribution and other employee costs;
- (ii) Administrative and General expenses which shall also include expense related to raising of loans;
- (iii) Repairs and Maintenance; and
- (iv) Other miscellaneous expenses, statutory levies and taxes (except corporate income tax).

4 The Licensee shall submit the O&M expenses for the Control Period as prescribed in Multi Tariff filing procedure. The O&M expenses for the Base Year shall be approved by the Commission taking into account the latest available audited accounts, business plan filed by the Licensees, estimates of the actuals for the Base Year, prudence check and any other factor considered appropriate by the Commission.

5 O&M expenses permissible towards ARR for each year of the Control Period shall be determined using the formula detailed below:

$$(i) \quad O\&M_n = (R\&M_n + EMP_n + A\&G_n) * (1 - X_n)$$

Where,

$$R\&M_n = K * GFA_{n-1};$$

$$EMP_n + A\&G_n = (EMP_{n-1} + A\&G_{n-1}) * (INDX);$$

$$INDX = 0.55 * CPI + 0.45 * WPI;$$

$X_n$  is an efficiency factor for  $n^{th}$  year. Value of  $X_n$  shall be determined by the Commission in the MYT Tariff order based on Licensee's filing, benchmarking, approved cost by the Commission in past and any other factor the Commission feels appropriate;

$EMP_n$  - Employee Costs of the Licensee for the  $n^{th}$  year;

$A\&G_n$  - Administrative and General Costs of the Licensee for the  $n^{th}$  year; and

$R\&M_n$  - Repair and Maintenance Costs of the Licensee for the  $n^{th}$  year.

6

Where,

- (i) 'K' is a constant (could be expressed in %). Value of K for each year of the Control Period shall be determined by the Commission in the MYT Tariff order based on Licensee's filing, benchmarking, approved cost by the Commission in past and any other factor considered appropriate by the Commission;

- (ii) INDX - Inflation Factor to be used for indexing. Value of INDX shall be a combination of the Consumer Price Index (CPI) and the Wholesale Price Index (WPI) for immediately preceding five years before the base year.

### Return on Capital Employed

7 Return on Capital Employed (RoCE) shall be used to provide a return to the Distribution Licensee, and shall cover all financing costs, without providing separate allowances for interest on loans and interest on working capital.

8 The Regulated Rate Base (RRB) shall be used to calculate the total capital employed which shall include the original cost of assets and working capital, less the accumulated depreciation. Capital work in progress (CWIP) shall not form part of the RRB. Consumer Contribution, capital subsidies / grants shall be deducted in arriving at the RRB.

9 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 and normative working capital.

10 The Regulated Rate Base for the  $i^{\text{th}}$  year of the Control Period shall be computed in the following manner:

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

Where,

' $i$ ' is the  $i^{\text{th}}$  year of the Control Period,  $i = 1, 2, 3, 4$  for the first Control Period;

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

$\Delta AB_i$ : Change in the Regulated Rate Base in the  $i^{\text{th}}$  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 is arrived at as follows:

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

Where,

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

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

$CC_i$ : Consumer Contributions, capital subsidy / grant pertaining to the  $\Delta AB_i$  and capital grants/subsidies received during  $i^{\text{th}}$  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  $i^{\text{th}}$  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;

$OCFA_0$ : Original Cost of Fixed Assets at the end of the Base Year available for use and necessary for the purpose of the Licensed business;

$AD_0$ : 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;

$CC_0$ : Total contributions pertaining to the  $OCFA_0$ , made by the consumers, capital subsidy / grants towards the cost of construction of distribution/service lines by the Distribution Licensee and also includes the capital grants/subsidies received for this purpose;

$\Delta WC_i$ : Change in normative working capital requirement in the  $i^{\text{th}}$  year of the Control Period, from the  $(i-1)^{\text{th}}$  year. For the first year of the Control Period ( $i=1$ ),  $\Delta WC_1$  shall be taken as the normative working capital requirement of the first year.

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

Where,

$WACC_i$  is the Weighted Average Cost of Capital for each year of the Control Period;

$$RoCE = WACC_i * RRB_i$$

$RRB_i$  - Regulated Rate Base is the asset base for each year of the Control Period based on the capitalisation and working capital.

12 The WACC for each year of the Control Period shall be computed at the start of the Control Period in the following manner:

Where,

$$WACC = \left[ \frac{D/E}{1 + D/E} \right] * r_d + \left[ \frac{1}{1 + D/E} \right] * r_e$$

D/E is the Debt to Equity Ratio and for the purpose of determination of tariff, debt-equity ratio for the asset capitalized shall be 70:30. Where equity employed is in excess of 30%, the amount of equity for the purpose of tariff shall be limited to 30% and the balance amount shall be considered as notional loan. The interest rate on the amount of equity in excess of 30% treated as notional loan shall be the weighted average rate of the loans of the Licensee for the respective years and shall be further limited to the prescribed rate of return on equity in the Regulations. Where actual equity employed is less than 30%, the actual equity and debt shall be considered: Provided that the Working capital shall be considered 100% debt financed for the calculation of WACC;

Provided further that the Debt to Equity Ratio for the assets covered under Transfer Scheme, dated July 1, 2002 shall be considered as per the debt and equity in the transfer scheme;

Provided further that Debt to Equity Ratio for the assets capitalised till 1.04.2012 (other than assets covered under Transfer Scheme) shall be considered as per the debt and equity approved by the Commission at the time of capitalization.

$r_d$  is the Cost of Debt and shall be determined at the beginning of the Control Period after considering Licensee's proposals, present cost of debt already contracted by the Licensee, credit rating, benchmarking and other relevant factors (risk free returns, risk premium, prime lending rate etc.);

$r_e$  is the Return on Equity and shall be considered at 16% post tax:

Provided further that any additional investment made by the Licensee other than in the fixed asset of the distribution business, shall not qualify for the return on equity.

13 The Distribution Licensee shall make every effort to refinance the loan as long as it results in net benefit to the consumers. The cost associated with such refinancing shall be borne by the consumers and any benefit on account of refinancing of loan and interest on loan shall be passed on to the consumers. Refinancing may also include restructuring of debt.

14 In case any moratorium period is availed by the Licensee, depreciation provided for in the tariff during the years of moratorium shall be treated as notional repayment of loan during those years and interest on loan shall be calculated accordingly.

#### **Working Capital**

15 Working capital for wheeling business of electricity shall consist of

- (i) Receivables for two months of Wheeling Charges.

16 Working capital for retail supply of electricity shall consist of

- (i) Receivables for two months of revenue from sale of electricity;
- (ii) Less: Power purchase costs for one month;
- (iii) Less: Transmission charges for one month; and
- (iv) Less: Wheeling charges for two month.

#### **Depreciation**

17 Depreciation shall be calculated for each year of the Control Period, on the amount of Original Cost of the Fixed Assets considered for calculation of the Regulated Rate Base of the corresponding year:

- (i) Provided that depreciation shall not be allowed on assets funded by consumer contribution (i.e., any receipts from consumers that are not treated as revenue) and capital subsidies/grants. Provision for replacement of such assets shall be made in the Capital Investment plan;

18 Provided further that the Licensee shall submit yearwise details of assets retired and disposed off, which shall be removed from the Original Cost of Fixed Assets;

19 Provided further that assets shall normally be not retired before completion of the useful life and the Licensee shall take prior approval of the Commission in case of retiring any asset before its useful life;

20 Provided further that the Licensee shall submit year-wise details of the assets which have completed its useful life.

21 Depreciation for each year of the Control Period shall be determined based on the methodology as specified in these Regulations along with the rates and other terms specified in Appendix 1 of these Regulations.

22 Depreciation shall be calculated annually, based on the straight line method, over the useful life of the asset. The base value for the purpose of depreciation shall be original cost of the asset.

23 The residual value of assets shall be considered as 10% and depreciation shall be allowed to a maximum of 90% of the original cost of the asset. Land is not a depreciable asset and its cost shall be excluded while computing 90% of the original cost of the asset:

24 Provided that if the Licensee is recovering less than residual value on disposing any retired assets, it shall take prior approval of the Commission before disposing such asset.

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



26 In addition to allowable depreciation, the Distribution Licensee shall be entitled to Advance Against Depreciation, computed in the manner given hereunder:

27 AAD = Loan (raised for capital expenditure) repayment amount based on loan repayment tenure, subject to a ceiling of 1/10th of loan amount minus depreciation as calculated on the basis of these Regulations;

28 Provided that Advance Against Depreciation shall be permitted only if the cumulative repayment up to a particular year exceeds the cumulative depreciation up to that year;

29 Provided further that Advance Against Depreciation in a year shall be restricted to the extent of difference between cumulative repayment and cumulative depreciation up to that year.

30 On repayment of entire loan, the remaining depreciable value shall be spread over the balance useful life of the asset.

#### **Cost of Power Procurement**

31 Quantum of Power Purchase - The Commission approved category-wise sales forecast shall be applied along with Distribution loss trajectory for estimating the Licensees' power procurement requirement for each year of the Control Period.

32 Distribution Licensee shall be allowed to recover the net cost of power it procures from sources approved by the Commission, viz. Intra-state and Inter-state Trading Licensees, Bilateral Purchases, Bulk Suppliers, State generators, Independent Power Producers, Central generating stations, non-conventional energy generators, generation business of the Distribution Licensee and others, assuming maximum normative rebate available from each source for payment of bills through letter of credit on presentation of bills for supply to consumers of Retail Supply Business;

(i) Provided that the Distribution Licensee shall propose the cost of power procurement taking into account the fuel adjustment formula specified for the generating stations and net revenues through bilateral exchanges and Unscheduled Interchange (UI) transactions;

(ii) Provided further that where the Licensee utilises a part of the power purchase approved or bulk supply allocated or contracted for the Retail Supply Business for its Trading Business, the Distribution Licensee shall provide an Allocation Statement clearly specifying the cost of power purchase that is attributable to such trading activity.

33 While approving the cost of power purchase, the Commission shall determine the quantum of power to be purchased from various sources in accordance with the principles of merit order schedule and despatch based on a ranking of all approved sources of supply in the order of their variable cost of power purchase. All power purchase costs shall be considered legitimate unless it is established that the merit order principle has been violated or power has been purchased at unreasonable rates or the power procurement guidelines as laid down by the Commission from time to time has not been followed.

34 To promote economical procurement of power as well as maximizing revenue from sale of surplus power, the Commission may evolve an appropriate mechanism to incentivise / penalise the Distribution Licensee.

35 The Renewable Purchase Obligation of the Distribution Licensee shall be as per the order issued by the Commission from time to time.

#### **AT&C Losses**

36 The Licensee shall propose AT&C loss reduction trajectory for each year of the Control Period. For any year of the Control Period, loss reduction should be at least 30% of the total AT&C loss reduction target for the Control Period. The Commission shall examine the filings made by the Licensee for the AT&C loss trajectory for each year of the Control Period and approve the same with modification as considered necessary.

37 The Distribution Licensee shall also propose voltage-wise losses for each year of the Control Period for the determination of voltage-wise cost of supply and determination of voltage-wise Wheeling Tariff.

#### **Transmission, Load Despatch & Wheeling Charges**

38 The Distribution Licensee shall be allowed to recover net transmission and load despatch charges payable to the Transmission Licensees (Central Transmission Utility, State Transmission Utility etc.) and System Operators (Regional Load Despatch Centre, State Load Despatch Centre etc.) for access to and use of the inter-state transmission system, intra-state transmission system and availing load despatch services assuming maximum normative rebate available from each source for payment of bills through letter of credit on presentation of bills in accordance with the tariffs approved from time to time by CERC and appropriate State Commissions, as the case may be.

39 The Distribution Licensee shall also be allowed to recover the Wheeling Charges in case the distribution network of other Distribution Licensee is used for procurement of power for the Retail Supply Business.

#### **Corporate Income Tax**

40 Tax on income, if any, liable to be paid on the Licensed business of the Distribution Licensee shall be limited to tax on return on the equity component of capital employed. Any additional tax other than this shall not be a pass through, and it shall be payable by the Distribution Licensee itself.

41 The actual assessment of income tax should take into account benefits of tax holiday, and the credit for carry forward losses applicable as per the provisions of the Income Tax Act 1961 shall be passed on to the consumers.

### **Interest on Consumer Security Deposits**

42 Interest paid on consumer security deposits shall be based on the rate specified by the Commission in the "Delhi Electricity Supply Code and Performance Standards Regulations, 2007", and shall be a pass through in the ARR.

### **Non-Tariff Income**

43 All incomes being incidental to electricity business and derived by the Licensee from sources, including but not limited to profit derived from disposal of assets, rents, net late payment surcharge (late payment surcharge less financing cost of late payment surcharge), meter rent (if any), income from investments, income on investment of consumer security deposit and miscellaneous receipts from the consumers shall constitute Non-Tariff Income of the Licensee:

44 Provided that income arising from investment of shareholder's funds, if any, shall not be included in Non-Tariff Income subject to prudence check of requisite detailed information submitted by the Licensee to the Commission.

45 The amount received by the Licensee on account of Non-Tariff Income shall be deducted from the aggregate revenue requirement in calculating the net revenue requirement of such Licensee.

### **Other Income of Licensee**

46 Where the Licensee is engaged in any other business, the income from such business shall be calculated as per "DERC Treatment of Income from Other Business of Transmission Licensee and Distribution Licensee Regulation, 2005" and shall be deducted from the Aggregate Revenue Requirement in calculating the revenue requirement of the Licensee;

47 Provided that the 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 as approved by the Board of Directors to the Commission along with his application for determination of tariff;

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

### **Income from cross-subsidy surcharge and additional surcharge on charges of wheeling**

49 The amount received or to be received by the Licensee on account of cross-subsidy surcharge and additional surcharge, as approved by the Commission from time to time in accordance with the Delhi Electricity Regulatory Commission (Terms and Conditions of Open Access) Regulations 2005 shall be shown separately against the consumer category that is permitted open access as per the phasing plan.

50 Cross-subsidy surcharge and additional surcharge shall be shown as revenue from tariff from the consumer categories permitted open access in accordance with the Delhi Electricity Regulatory Commission (Terms and Conditions of Open Access) Regulations 2005 and such amount shall be utilized to meet the cross-subsidy requirements of subsidised categories and fixed costs of the Licensee arising out of his obligation to supply. The Licensee shall provide such details in its annual filings.

### **Truing Up Mechanism**

51 Truing-up shall be carried out in accordance with Regulation A4:21, for each year based on the actual/audited information and prudence check by the Commission;

(i) Provided that if such variations are large, and it is not feasible to recover in one year alone, the Commission may take a view to create a regulatory asset, as per the guidelines provided in clause 8.2.2 of the National Tariff Policy.

(ii) Provided further that under business as usual conditions, the Commission, to ensure tariff stability, may include the opening balances of uncovered gap / trued-up costs in the subsequent Control Period's ARR instead of including in the year succeeding the relevant year of the control period after providing for transition financing arrangement or capital restructuring.

### **A6: QUALITY OF SUPPLY AND SERVICES**

1 The quality of supply and the customer service parameters shall be monitored as per the norms specified by the Commission from time to time.

2 The Licensee shall propose baseline and performance trajectory for all quality parameters as specified in the Delhi Electricity Supply Code and Performance Standards Regulations 2007 including amendments thereto.

3 The Commission shall make an assessment on reliability of baseline data and may prescribe the performance trajectory for each identified parameter for the Control Period. The Commission shall develop a performance framework to encourage Licensees to improve quality of supply and services.

4 The Licensee shall submit the performance on each parameter in the form and manner directed by the Commission. The Commission shall conduct periodic reviews on the performance of the Licensee with respect to quality parameters.

### **A7: MULTI YEAR TARIFF PROCESS**

1 The Multi Year Tariff filing shall be in such form and in such manner as may be decided by the Commission and as per the provisions of Conduct of Business Regulations.

2 The Licensee shall also submit the Multi Year Tariff filing in electronic format to the Commission.

### **Multi-Year Filings for the Control Period**

**Business Plan Filings**

3 The Distribution Licensee shall file for the Commission's approval, on 1<sup>st</sup> April of the year preceding the first year of the Control Period or any other date as may be directed by the Commission, a Business Plan approved by the Board of Directors. The Business Plan shall be for the entire Control Period and shall, inter alia, contain;

- (i) Sales/Demand Forecast for each customer category and sub-categories for each year of the Control Period;
- (ii) AT&C loss reduction trajectory and collection efficiency for each year of the Business Plan;
- (iii) Power Procurement Plan based on the sales forecast and distribution loss trajectory for each year of the business plan period. The power procurement plan should also include Energy Efficiency and Demand Side Management measures;
- (iv) The Capital Investment Plan shall take into account the sales/demand forecast, power procurement plan, distribution loss trajectory, targets for quality of supply, etc. The investment plan shall be consistent with the perspective plan drawn by the State Transmission Utility, and shall include the corresponding capitalisation schedule and financing plan;
- (v) The appropriate capital structure and cost of financing (interest on debt) and return on equity, terms of the existing loan agreements, etc;
- (vi) The Operation and Maintenance (O&M) costs estimated for the Base Year and two years prior to the Base Year with complete details, together with the forecast for each year of the Business Plan Period based on the proposed efficiency in operating costs, norms for O&M cost allowance including indexation and other appropriate mechanism;
- (vii) Details of depreciation based on the fair life of the asset and capitalisation schedules for each year of the Control Period;
- (viii) A set of targets proposed for other controllable items such as working capital, quality of supply targets, etc. The targets shall be consistent with the capital investment plan proposed by the Licensee;
- (ix) Proposals for other items such as external parameters used for indexation (inflation, etc);
- (x) The filings in addition to the Business Plan period shall also contain the data for the cost and revenue parameters for the 2002 – 2012 period.

**Tariff Filing**

4 The Distribution Licensee shall file an application for approval of Wheeling Tariff and Retail Supply Tariff for each year of the Control Period, not less than 120 days before the commencement of the first year of the Control Period or such other date as may be directed by the Commission.

5 The Licensee shall propose capacity based Wheeling Tariff. The Licensee shall also specify the distribution losses voltage-wise to provide for adjustment of losses in the system.

6 The filings for Wheeling Tariff shall contain the following:

- (i) The Distribution system or network usage forecast for each year of the Control Period consistent with the Business Plan;
- (ii) Proposals for computation of tariffs for Wheeling of electricity for each of the years of the Control Period, including the losses and the procedure thereof;
- (iii) Proposals for Non-Tariff Income with item-wise description and details;
- (iv) Proposals in respect of income from Other Businesses like Consultancy Services, Convergence, Training Facilities, etc;
- (v) The proposed Wheeling Tariff shall be voltage-wise;
- (vi) Expected Revenue from the proposed Wheeling Tariff including additional surcharge, etc.

7 The filings for Retail Supply Tariff shall contain the following:

- (i) Licensee shall submit proposal for retail sale of electricity for the consumers pertaining to Retail Supply Business, which shall include tariffs for each consumer category, slab-wise and voltage wise. The proposed tariff may also be based on energy charges, demand charges, minimum charges, etc along with the tariff rationalization measures;
- (ii) Proposals for Non-Tariff Income with item-wise description and details;
- (iii) Each tariff proposal submitted by the Distribution Licensee shall be supported with a cost-of-service model allocating the costs of the Licensed business to each category of consumers based on voltage-wise costs and losses;
- (iv) The tariff proposals of the Licensee should demonstrate that the tariffs are progressively reflecting the cost of supply;



- (v) Expected Revenue from the proposed Retail Supply Tariff, and other matters considered appropriate by the Distribution Licensee, including incentive schemes to consumers, cross subsidy surcharge, etc.

#### **Annual Performance Review (APR) during the Control Period**

8 The Distribution Licensee shall submit information as part of annual review on actual performance to assess its performance vis-à-vis performance targets approved by the Commission at the beginning of the Control Period. The Licensee shall submit information on performance on uncontrollable parameters (Sales, Power Purchase, Non-Tariff Income, etc) and controllable parameters (AT&C Losses, Distribution Losses, Collection Efficiency, O&M Expenses, capital investment, capitalisation, depreciation, RoCE, etc).

9 The Licensee shall submit the revised ARR and corresponding tariff adjustments 120 days before the commencement of the Financial Year. The revised estimates shall be required because of trued-up costs on account of uncontrollable variations, revised sales and power purchase estimates, depreciation, Return on Capital Employed, incentive mechanism for exceeding the targets, and implementation of performance framework for quality of supply targets as per the prescribed formats.

#### **Review at the end of the Control Period**

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

11 The end of the Control Period shall be the beginning of the next Control Period and the Licensee shall follow the same procedure unless required otherwise by the Commission. The Commission shall analyse the performance of the Licensee with respect to the targets set out at the beginning of the Control Period and based on the actual performance, expected efficiency improvements and other factors prevalent, determine the initial values for the next Control Period.

#### **A8: GOVERNMENT SUPPORT FOR SOCIAL CAUSES**

1 Any class of consumers, be it a consumer below the poverty line, school, hospital etc, desirous of seeking Government support by way of subsidy, shall approach the Government of NCT of Delhi for this purpose. It would be the discretion of the Government of NCT of Delhi to consider giving subsidy to any class of consumers it so desires;

- (i) Provided that the amount towards social causes and subsidy for a particular year of the Control Period shall be paid at least in four equal quarterly instalments and in advance to the period to which it is applicable;

2 Provided further that no such direction of the State Government shall be operative if the subsidy payment is not made in accordance with the provisions contained in this section and the tariff fixed by the Commission shall be applicable from the date of issue of orders.

#### **A9: DISPOSAL OF APPLICATION**

1 The Commission shall process the filings made by the Distribution Licensee in accordance with these Regulations and the Conduct of Business Regulations.

2 Based on the Distribution Licensees' filings, objections/ suggestions from public and other stakeholders, the Commission may accept the application with such modifications and/or such conditions as may be deemed just and appropriate and issue, within 120 days of the receipt of the application and after considering all suggestions and objections from public and other stakeholders, an Order containing, inter alia targets for controllable items and the approved ARR for the Wheeling Business and the ARR for the Retail Supply Business along with the Wheeling Tariff and Retail Supply Tariff.

#### **A10: PERIODIC REVIEWS**

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

2 The Distribution Licensee shall submit information as part of annual review on actual performance to assess the performance vis-à-vis the targets approved by the Commission at the beginning of the Control Period. This shall include annual statements of its performance and accounts including latest available audited accounts as well as the regulatory accounts in the prescribed formats and the tariff worked out in accordance with these Regulations.

3 The Licensee shall submit the revised Aggregate Revenue Requirement and corresponding tariff adjustments 120 days before the commencement of the Financial Year.

4 The Commission may also specify any modifications to the forecast of the Distribution Licensee for the remainder of the Control Period, with detailed reasons for the same.

#### **A11: TRUING UP FOR THE PREVIOUS CONTROL PERIOD**

1 Performance review and adjustment of variations of the Distribution Licensees for year FY 2011-12 shall be considered during the Control Period in accordance with the applicable MYT Regulations for that period.



**A12: MISCELLANEOUS****Issue of Orders and Practice Directions**

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

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

**Powers to remove difficulties**

3 If any difficulty arises in giving effect to any of the provisions of these Regulations, the Commission may, by a general or special order, not being inconsistent with the provisions of these Regulations or the Act, do or undertake to do things or direct the Licensee to do or undertake such things which appear to be necessary or expedient for the purpose of removing the difficulties.

**Power of Relaxation**

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

**Interpretation**

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

**Saving of Inherent Powers of the Commission**

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

**Enquiry and Investigation**

7 All enquiries, investigations and adjudications under these Regulations shall be done by the Commission through the proceedings in accordance with the provisions of the Conduct of Business Regulations.

**Power to Amend**

8 The Commission, for reasons to be recorded in writing, may at any time vary, alter or modify any of the provision of these Regulations by amendment.

JAYSHREE RAGHURAMAN  
SECRETARY

**Appendix 1: Depreciation Schedule**

S. No.	Asset Class	Useful Life (Years)	Rate (%)
1	Land owned under full title	Infinity	0
2	Land held under lease		
(A)	For investment in land	The period of lease or the period remaining unexpired on the Assignment of the lease	0
(B)	For cost of clearing site	The period of lease remaining unexpired at the date of clearing the site	0
3	Assets Purchased New		
(A)	Plant and machinery in generating stations including plant foundations		
(i)	Hydro-electric	35	2.57
(ii)	Steam-electric NHRS & Waste Heat Recovery Boilers / Plants	25	3.60
(iii)	Diesel electric & gas plant	15	6.00
(B)	Cooling towers and circulating water systems	25	3.60
(C)	Hydraulic works forming part of hydro-electric system including:		
(i)	Dams, spillways weirs, canals, reinforced concrete flumes & siphons	50	1.80
(ii)	Reinforced concrete pipelines and surge tanks, steel pipelines, sluice gates, steel surge (tanks) hydraulic control valves and other hydraulic works	35	2.57
(D)	Building & civil engineering works of a permanent		

S. No	Asset Class	Useful Life (Years)	Rate (%)
	character, not mentioned above:		
(i)	Offices & showrooms	50	1.80
(ii)	Containing thermo-electric generating plant	25	3.60
(iii)	Containing hydro-electric generating plant	35	2.57
(iv)	Temporary erection such as wooden structures	5	18.00
(v)	Roads other than kutchra roads	50	1.80
(vi)	Others	50	1.80
(E)	Transformers, transformer (kiosk) sub-station equipment & other fixed apparatus (including plant foundations)		
(i)	Transformers (including foundations) having a rating of 100 kilo volt amperes and over	25	3.60
(ii)	Others	25	3.60
(F)	Switchgear, including cable connections	25	3.60
(G)	Lightning arrestors:		
(i)	Station type	25	3.60
(ii)	Pole type	15	6.00
(iii)	Synchronous condenser	35	2.57
(H)	Batteries	5	18.00
(I)	Underground cable including joint boxes and disconnected boxes	35	2.57
(J)	Cable duct system	50	1.80
(K)	Overhead lines including supports:		
(i)	Lines on fabricated steel operating at nominal voltages higher than 66 kV	35	2.57
(ii)	Lines on steel supports operating at nominal voltages higher than 13.2 kV but not exceeding 66 kV	25	3.60
(iii)	Lines on steel or reinforced concrete supports	25	3.60
(iv)	Lines on treated wood supports	25	3.60
(L)	Meters	15	6.00
(M)	Self propelled vehicles	5	18.00
(N)	Air conditioning plants:		
(i)	Static	15	6.00
(ii)	Portable	5	18.00
(O)			
(i)	Office furniture and fittings	15	6.00
(ii)	Office equipments	15	6.00
(iii)	Internal wirings including fittings and apparatus	15	6.00
(iv)	Street Light fittings	15	6.00
(P)	Apparatus let on hire:		
(i)	Other than motors	5	18.00
(ii)	Motors	15	6.00
(Q)	Communication equipment		
(i)	Radio and higher frequency carrier systems	15	6.00
(ii)	Telephone lines and telephones	15	6.00
(R)	Assets purchased in second hand and assets not otherwise provided for in the schedule	Such reasonable period as the Commission determines in each case having regard to the nature, age and conditions of assets at the time of its acquisition by the owner	

**Appendix 2: Segregation of Cost between Wheeling and Retail Supply business**

The typical role of a Distribution company is:

1. **Distribution Wheeling function** involves transporting of electricity from transmission systems (transmission ends at 66kV) to customers. Traditionally described as "customer end" part of wires business (transmission is the "generator end"). This involves setting up of network consisting of the poles, wires, transformers etc. to reach the electricity physically to the consumer. Main activities are:
  - (a) setting up of physical network – poles, wires, transformers etc to provide electricity to consumers
  - (b) obtaining the 'right-of-way' – in order to set up the network poles, distribution wires company should approach the local authorities for obtaining permission
  - (c) new connections – extension or erection of network, so that new area loads are added to the systems – either a pull or push growth phenomenon
  - (d) maintenance of network – ensuring that the network is in good condition, available to dispatch electricity at any time and is adequate (doesn't cause electrical instability)
  - (e) quality of supply – maintaining proper conductor, transformer loading, transformer maintenance such that the consumer is assured of quality power – assured voltage, assured ampere and frequency
2. **Retail supply function** is also called as merchant function (not physical function). Retailing is sale of electricity to the final consumers and till recently thought of as part of distribution business. The main activities involved are
  - (a) Procurement of electricity from wholesaler or bulk supplier (as mentioned earlier, the electricity generated, flows directly to consumer through wires at various voltages).
  - (b) Pricing of electricity
  - (c) Selling of electricity including the following commercial functions
  - (d) connection of consumer to the network – on payment of certain charges and signing up to consume energy equivalent of 'x' kw of load – categorization depending on the type of service (LT – Domestic, commercial, industry of certain voltage and HT – Colonies, industries, Railways etc)
  - (e) metering of energy used by consumers – setting up meter in consumer premises, their maintenance, reading the meters at regular intervals and ensuring that energy accounting tallies up
  - (f) commercial losses – meaning that energy has been consumed but not billed, either because the consumer is not accounted or because the meters are not read properly or not working or simply theft of energy by consumers
  - (g) billing of electricity supplied – usually on variety of factors such as connected load, load factor, energy demand, energy supplied, consumer service etc. and approved by regulator at periodic intervals
  - (h) collection of bills – setting up infrastructure of collecting the dues from consumers such as 'section offices, kiosks, mobile vans, internet, cheque drop boxes, auto-debit to accounts' etc.
  - (i) disconnection of service – as per the contract with the consumer, the supplier is allowed to discontinue services to the consumer. Reconnection is possible with clearing of dues and payment of re-connection charges

**Segregation of Distribution in Wheeling & Retail Supply**

The total cost of a Distribution company includes:

1. Purchase of Electricity
  - (a) Capacity Charge
  - (b) Energy Charge
2. Operation & Maintenance Expenses
  - (a) Employee Cost
  - (b) Administration Cost
  - (c) R&M Cost
3. Capital Cost
  - (a) Deprecation
  - (b) Interest charges
  - (c) Return

### Cost Allocation

The proposed allocation is based on the premise that the distribution infrastructure up to the consumer's meter is part of the wires business and the distribution infrastructure from meter to consumer premises is part of the Retail Supply business. The approach proposed for allocation of expenditure between Wheeling and Retail Supply is discussed below:

#### 1. Purchase of Electricity

The entire power purchase cost including transmission charges will be allocated to the Retail Supply business.

#### 2. Allocation of Capital Cost

To allocate the capital cost, it is important to split the total assets under the distribution company into Wheeling and Retail Supply business.

The Distribution Company shall identify the assets pertaining to Retail Supply (since the retail supply assets would be lesser in number) and allocate the balance asset to the Distribution business. The major components that would form part in the Asset Book (GFA) of a Retail Supply company would be Meters and billing equipments (computer etc).

Most of the Plant and Machinery and Lines and Cables based assets would form part of the Distribution Assets the same can be allocated to Distribution business. Other fixed assets like Buildings, office equipments, furniture and fixtures, vehicles etc. can be apportioned on the basis of predominant usage concept.

- (a) Depreciation: Based on the allocation of fixed assets to each function, depreciation for each asset sub-group can be proportionately allocated.
- (b) Interest & Financing Charges: Distribution company shall either identify specific loan taken for each of the business (Wheeling & Retail Supply) depending on the nature of the business or allocate based upon the ratio of asset allocation. The interest and finance charges can be charged to the respective function based on the loans identified.
- (c) Returns: Returns shall be allocated on the proposed ratio of fixed assets between Wheeling and Retail Supply business.

#### 3. Operation & Maintenance (O&M) Expenses

The proposed allocation for O&M expenses is discussed below:

- (a) Employee Cost: To segregate the employee cost on the basis of employee requirement to undertake the Retail Supply business. Distribution Company could do an evaluation on the number of employees that could be allocated to the Retail Supply business. This evaluation could be done on a thumb rule basis:
  - (i) The power purchase team/ division could be allocated to the Retail Supply business,
  - (ii) The number of employees involved in metering, billing and collection could be allocated to Retail Supply business, and
  - (iii) Any other which the Distribution Company may feel relevant.

The rest of the employees would be considered in the Wheeling business. The distribution licensee shall compile the list of employees at different levels and allocate the same of the approach mentioned above. The employee cost shall then be automatically be allocated between Wheeling and Retail Supply based on the employees allocated to the respective businesses. The employee capitalisation should be considered in the ARR of the Wheeling business.
- (b) A&G Cost: A&G expenses related to power purchase, metering, billing and collection, financing expenses on loan related to Retail Supply business shall be allocated to Retail Supply business. Office expenses like telephone, stationery, electricity, lease rent etc shall be apportioned between Wheeling and Retail Supply business on the basis of predominant usage concept.
- (c) R&M Expenses: R&M expenses shall be allocated on the proposed ratio of fixed assets between Wheeling and Retail Supply business. For the purpose of getting more accuracy, the allocation should be done by allocating the R&M sub-heads related to specific asset category in the ratio of the respective classified under Wheeling and Retail Supply business i.e. R&M (Plant and Machinery) could be allocated in the ratio of Gross fixed asset value of Plant and Machinery classified under Wheeling and Retail Supply business.

#### Other/ Miscellaneous Expenses

Other than the expenses discussed above, the Retail Supply business would also be liable for the expenses for Interest on Consumer Security Deposits, UI Charges, Financing of LPSC.