# HIMACHAL PRADESH ELECTRICITY REGULATORY COMMISSION SHIMLA

## NOTIFICATION

## Shimla, the 1<sup>st</sup> April 2011

**No. HPERC/Trans/479.** - Whereas section 61 of the Electricity Act, 2003 (36 of 2003), provides that the Appropriate Commission shall specify the terms and conditions for the determination of tariff, and in doing so, shall be guided by the principles and methodologies specified by the Central Commission for determination of tariff applicable to transmission licensees and also by the National Tariff Policy formulated under the said Act;

And Whereas the Himachal Pradesh Electricity Regulatory Commission has framed the HPERC (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2007;

And Whereas the Central Commission has subsequently framed the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009, specifying the principles and methodologies to be followed for determination of tariff applicable to transmission systems of the licensee(s) and various changes have also been made in the National Tariff Policy;

And Whereas the Himachal Pradesh Electricity Regulatory Commission is making an exercise to determine the tariff for transmission system of the licensees for the next control period starting from 1st April, 2011 and keeping in view the National Tariff Policy and methodologies of the Central Commission, amongst others, it has become necessary to amend/ modify the existing regulations;

Now, therefore, in exercise of the powers conferred by clauses (zd), (ze) and (zf) of sub-section (2) of section 181, read with sections 61, 62 and 86, of the of the Electricity Act, 2003 (36 of 2003) and all other powers enabling it in this behalf and after previous publication, the Himachal Pradesh Electricity Regulatory Commission makes the following regulations for determination of transmission tariff:-

# REGULATIONS

# PART-I

# PRELIMINARY

## 1. Short title, extent and commencement

- (1) These regulations shall be called the Himachal Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2011.
- (2) These regulations shall extend to the whole of the State of Himachal Pradesh
- (3) These regulations shall come into force with effect from  $1^{st}$  April, 2011.

## 2. Scope and application

- (1) These regulations shall be applicable where the capital cost based tariff for the transmission system is determined by the Commission under section 62 of the Act, read with section 86 thereof.
- (2) Where tariff has been determined through transparent process of bidding in accordance with the guidelines issued by the Central Government, the Commission shall adopt such tariff in accordance with the provisions of the Act.

## 3. Definitions:

In these regulations, unless the context otherwise requires, -

- (1) "Act" means the Electricity Act, 2003 (36 of 2003);
- (2) **"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 regulation 16;
- (3) "**aggregate revenue requirement**" or "ARR" means 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;
- (4) **"allotted transmission capacity"** means and includes 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 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 expression "allotment of capacity" shall be construed accordingly;

- (5) "**allocation statement**" means for each financial year, a statement in respect of each of the businesses (transmission and SLDC business) of the licensee, showing the amounts of any revenue, cost, asset, liability, reserve or provision etc, which has been either-
  - (a) 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
  - (b) charged from or to each such other business together with a description of the basis of that charge;
- (6) "Appendix" means the appendix to these regulations;
- (7) "**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;
- (8) "**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;
- (9) "**base year**" means the financial year immediately preceding first year of the control period and used for the purposes of these regulations;
- (10) "beneficiary" means a long term transmission customer;
- (11)" capital cost" means the capital cost as defined in regulation 14;
- (12) "Central Commission" means the Central Electricity Regulatory Commission, as referred to in sub- section (1) of section 76 of the Act;
- (13) "change in law" means occurrence of any of the following events-:-
  - (a) the enactment, bringing into effect, adoption, promulgation, amendment, modification or repeal of any law, or
  - (b) 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

- (c) change by any competent statutory authority, in any consent, approval or licence available or obtained for the project;
- (14) "**Commission**" means the Himachal Pradesh Electricity Regulatory Commission, as referred to in sub- section (1) of section 82 of the Act;
- (15) "**Conduct of Business Regulations**" means the Conduct of Business Regulations specified by the Commission under sub-section (1) of section 92 of Act;
- (16) "**control period**" means a multi-year period fixed, by the Commission, from time to time, for which the principles of determination of revenue requirement and tariff will be laid down;
- (17) "**cut-off date**" means 31<sup>st</sup> 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 31<sup>st</sup> March of the year closing after three years of the year of commercial operation;
- (18) "**date of commercial operation**" or "COD" means 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:

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:

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;

- (19)"**day**" means the 24 hour period starting at 0000 hour;
- (20) "**distribution licensee**" means a licensee authorised to operate and maintain a distribution system for supplying electricity to the consumers in his area of supply;
- (21) **"existing project"** means a project declared under commercial operation from a date prior to 01.04.2011;
- (22) "**financial year**" means a period commencing on 1<sup>st</sup> April of a calendar year and ending on 31<sup>st</sup> March of the subsequent calendar year;
- (23) "intra-State transmission system" means any system for conveyance of electricity by transmission lines within the area of the State and includes all

transmission lines, sub-stations and associated equipment of the transmission licensees in the State:

Provided that the definition of point of separation between a transmission system and distribution system and between a generating station and transmission system shall be guided by the provisions of the Regulations notified by the Authority under clause (b) of section 73 of the Act;

- (24) "licence" means a licence granted by the Commission under section 14 of the Act;
- (25) "**licensed business**" means the functions and activities, which the licensee is required to undertake in terms of the licence granted by the Commission or being a deemed licensee under the Act;
- (26) "licensee" means a person who has been granted a licence and shall include a deemed licensee;
- (27) "**long term transmission customer**" means a person availing or intending to avail access to the intra-State transmission system for a period of twelve years or more and less than twenty five years;
- (28) **"medium term transmission customer"** means a person availing or intending to avail access to the intra-state transmission system for a period of three months or more and less than three years;
- (29) "**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;
- (30) "**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;
- (31) "**other business**" means any business of the transmission licensee other than the licensed business;
- (32) "project" means the transmission system;
- (33) **"rated voltage"** means the voltage at which the transmission system is designed to operate or such lower voltage at which the line is charged, for the time being, in consultation with long-term transmission customers;
- (34) "short term transmission customer" means a person availing or intending to avail access to the intra-State transmission system for a period up to 1 month;
- (35) "State" means the State of Himachal Pradesh;

- (36) **"transmission business"** means the authorised business of a transmission licensee to transmit electricity, whether for its own account or for that of any other person, through any system owned and/ or operated by such licensee;
- (37) **"transmission licensee"** means the entity, which has been granted a transmission licence or is a deemed licensee under the first, second, third or fifth provisos to section 14 of the Act;
- (38) **"transmission service agreement"** means and includes the agreement, contract, memorandum of understanding, or any such other covenants, entered into between the transmission licensee and the beneficiaries;
- (39) "**transmission system**" means the system consisting mainly of extra high voltage electric lines having design voltage of above 33 kV, owned or controlled by the transmission licensee, and used for the purposes of the conveyance of electricity between the switchyards of two generating sets or from the switchyard of a generating set to a sub-station, or between substations, or to or from any external interconnection and includes all bays/equipment upto 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;
- (40) "**user**" means the distribution licensee or open access customer, as the case may be, who uses the intra–State transmission network for the purpose of selling/procuring electricity;
- (41) **'useful life'** in relation to a unit of a transmission system from the COD shall mean the following, namely:-
  - (a) AC and DC sub-station 25 years
  - (b) Transmission line 35 years;
- (42) "year" means a financial year; and
- (43) the words and expressions used in these regulations and not defined herein but defined in the Act shall have the meanings respectively assigned to them in the Act.

# PART-II

# **GUIDING PRINCIPLES**

## 4. General Approach

- (1) In accordance with the principles laid down in these regulations, the Commission shall determine the aggregate revenue requirement (ARR) for the transmission business.
- (2) Tariff determined by the Commission and the directions given in the tariff order made by the Commission shall be quid pro quo and mutually inclusive. The tariff determined shall, within the period specified by it, be subject to the compliance of the directions to the satisfaction of the Commission and their non-compliance shall lead to such amendment, revocation, variation and alteration of the tariff, as may be ordered by the Commission.
- (3) The tariff order shall, unless amended or revoked, continue to be in force for such period as may be specified in the tariff order. In the event of failure on the part of the licensee to file the aggregate revenue requirement (ARR) under Part-IV and V, the tariff determined by the Commission shall cease to operate, unless allowed to be continued for a further period with such variations, or modifications, as may be ordered by the Commission.

## 5. Multi Year Tariff (MYT) Framework

- (1) The Commission shall adopt multi year tariff framework for approval of ARR and expected revenue from tariffs and charges. The ARR and tariffs will be determined for the control period.
- (2) The multi year tariff framework shall be based on the following: -
  - (a) **Business plan** of the transmission licensee for the entire control period to be submitted to the Commission for approval, prior to the beginning of the control period;
  - (b) **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.

## 6. Determination of Baseline

The baseline values (operating and cost parameters) for the base year of the control period shall be determined by the Commission and shall be based on the approved values by the Commission, the latest audited accounts, estimate of the actuals for the relevant year, prudence check and other factors considered

appropriate by the Commission. The Commission may re-determine the baseline values for the base year based upon the actual audited accounts of the base year.

## 7. Capital Investment Plan

- (1) 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 transmission customer and any plans of new transmission system, based on network expansion plans within the State.
- (2) 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.
- (3) 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-
  - (a) 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);
  - (b) Capital Structure;
  - (c) Capitalisation Schedule;
  - (d) Financing Plan;
  - (e) Cost-benefit analysis;
  - (f) Improvement in operational efficiency envisaged in the control period.
- (4) The Commission shall review the 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. In the normal course, the Commission shall not revisit the approved capital investment plan (capital expenditure and capitalisation schedule) during the control period and adjustment to depreciation, interest on capital loan and return on equity for the actual capital expenditure incurred and capitalisation vis-à-vis approved capital investment plan (capital expenditure and capitalisation) shall be done at the end of control period.
- (5) In case the capital expenditure is required for emergency work which has not been approved in the Capital Investment Plan, the licensee shall submit an application (containing all relevant information along with reasons justifying emergency nature of the proposed work seeking approval by the Commission.

The licensee shall take up the work prior to the approval of the Commission provided that the emergency nature of the scheme has been certified by its board of directors.

## 8. Renovation and Modernisation

- (1) The transmission licensee for meeting the expenditure on renovation and modernization 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.
- (2) Where the transmission licensee makes an application for approval of renovation and modernisation 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.
- (3) Any expenditure incurred or projected to be incurred as admitted by the Commission after prudent check based on the estimates of renovation and modernisation 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.

## 9. Controllable Parameters

The Commission will set targets for the items or parameters that are deemed to be "controllable" and which will include -

- (a) Availability of the transmission system;
- (b) Operation and Maintenance Expenses which includes employee expenses, repairs and maintenance expenses, administration and general expenses and other miscellaneous expenses viz. audit fees, rents, legal fees etc;
- (c) Financing cost which includes cost of debt including working capital (interest), cost of equity (return);
- (d) Depreciation.

## 10. True Up

- (1) The true up across various controllable parameters shall be conducted as per principles stated below:
  - (a) any surplus and deficit on account of O&M expenses shall be to the account of the transmission licensee and shall not be trued up in ARR; and
  - (b) at the end of the control period
    - (i) the Commission shall review actual capital investment vis-à-vis approved capital investment;
    - (ii) depreciation and financing cost, which includes cost of debt including working capital (interest), cost of equity (return) shall be trued up on the basis of actual/audited information and prudence check by the Commission.
- (2) Notwithstanding anything contained in these regulations, the gains or losses in the controllable items of ARR on account of *force majeure* factors shall be passed on as an additional charge or rebate in ARR over such period as may be laid down in the order of the Commission.

## **11. Operational Norms**

**Normative Annual Transmission System Availability Factor (NATAF):** The target availability for recovery of full transmission charges during the control period shall be as under: -

- (a) the alternating current (AC) System: 98%
- (b) the high voltage direct current (HVDC) bi-pole links: 92%
- (c) the high voltage direct current (HVDC) back-to-back stations: 95%.

# PART-III

# PRINCIPLES FOR DETERMINATION OF AGGREGATE REVENUE REQUIREMENT (ARR)

## **12. ARR for Transmission Licensee**

(1) Tariff in respect of the transmission system may be determined for the whole of the transmission system or for the individual transmission line / sub-station.

- (2) The aggregate revenue requirement for the transmission business for each year of the control period shall contain the following items: -
  - (a) Operation and Maintenance expenses;
  - (b) financing cost which includes cost of debt including working capital (interest), cost of equity (return);
  - (c) depreciation;
  - (d) income tax;
  - (e) non-tariff income ; and

#### Less:

(i) income from other business.

#### 13. Operation and Maintenance (O&M) Expenses

- (1) Operation and Maintenance (O&M) expenses shall comprise of the following:-
  - (a) salaries, wages, pension contribution and other employee costs;
  - (b) administrative and general expenses including insurance charges if any;
  - (c) repairs and maintenance expenses;
  - (d) other miscellaneous expenses, statutory levies and taxes (except corporate income tax).
- (2) The transmission licensee shall submit the O&M expenses for the control period as laid down in the multi year tariff filing procedure. The O&M expenses for the base year will be approved by the Commission taking into account the latest available audited accounts, business plan filed by the transmission licensee, estimates of the actuals for the base year, prudence check and any other factors considered appropriate by the Commission.
- (3) The O&M expenses for the n<sup>th</sup> year of the control period shall be approved based on the formula given below:-

 $O\&M_n = R\&M_n + EMP_n + A\&G_n$ 

Where -

 $EMP_n = (EMP_{n-1})^* (1+G_n)^* (CPI_{inflation})$ 

 $A\&G_n = (A\&G_{n-1})^*(WPI_{inflation})$ 

'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 of repair and maintenance expenses, approved repair and maintenance expenses vis-à-vis GFA approved by the Commission in past and any other factor considered appropriate by the Commission;

 $CPI_{inflation}$  – is the average increase in the Consumer Price Index (CPI) for immediately preceding three years before the base year;

 $WPI_{inflation}$  – is the average increase in the Wholesale Price Index (CPI) for immediately preceding three years before the base year;

EMP<sub>n</sub> – employee's cost of the transmission licensee for the nth year;

 $A\&G_n$  – administrative and general costs of the transmission licensee for the nth year;

 $R\&M_n$  – repair and maintenance costs of the transmission licensee for the nth year;

GFA<sub>n-1</sub> – Gross Fixed Asset of the transmission licensee for the n-1th year;

Gn is a growth factor for the nth year. Value of Gn shall be determined by the Commission in the MYT tariff order for meeting the additional manpower requirement based on licensee's filings, benchmarking, approved cost by the Commission in past and any other factor that the Commission feels appropriate:

Provided that repair and maintenance expenses determined shall be utilised towards repair and maintenance works only.

## **14. Capital cost of the project**

- (1) The 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, after prudence check;
  - (b) capitalised initial spares subject to the ceiling norms as per regulation 15;

(c) additional capital expenditure determined under regulation 16:

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

(2) The capital cost admitted by the Commission, after prudence check, shall form the basis for determination of tariff:

Provided that the prudence check of capital cost may be carried out based on the benchmark norms to be specified by the Commission from time to time:

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:

Provided further that where the implementation agreement and the transmission service agreement entered into between the transmission licensee and the longterm transmission customer provides for ceiling of actual expenditure, the capital expenditure admitted by the Commission shall take into consideration such ceiling for determination of tariff:

Provided further that in case of the existing projects, the capital cost admitted by the Commission prior to 01.04.2011 and the additional capital expenditure projected to be incurred for the respective years of the control period, as may be admitted by the Commission, shall form the basis for determination of tariff.

## 15. Initial Spares

Initial spares shall be capitalised as a percentage of the original project cost, subject to following ceiling norms:-

- (a) transmission line 0.75%
- (b) transmission Sub-station 2.5%
- (c) Series Compensation devices and HVDC Station 3.5%

#### **16. Additional Capitalisation**

- (1) 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-
  - (a) undischarged liabilities;

- (b) works deferred for execution;
- (c) procurement of initial capital spares within the original scope of work, subject to the provisions of regulation 15;
- (d) liabilities to meet award of arbitration or for compliance of the order or decree of a court; and
- (e) change in law:

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.

- (2) 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:-
  - (a) liabilities to meet award of arbitration or for compliance of the order or decree of a court;
  - (b) change in law;
  - (c) in case of transmission system any additional expenditure on items such as relays, control and instrumentation, computer system, power line carrier communication, DC batteries, replacement of switchyard equipment due to increase of fault level, emergency restoration system, insulators cleaning infrastructure, replacement of damaged equipment not covered by insurance and any other expenditure which has become necessary for successful and efficient operation of transmission system:

Provided that any expenditure on acquiring the minor items or the assets like tools and tackles, furniture, air-conditioners, voltage stabilizers, refrigerators, coolers, fans, washing machines, heat convectors, mattresses, carpets etc. brought after the cut-off date shall not be considered for additional capitalisation for determination of tariff w.e.f. 1.4.2011.

#### 17. Asset Base

(1) The Commission shall determine the asset base for each year of the control period at the beginning of the control period, which shall be -

Sum of-

(a) The asset base of the base year as determined by the Commission considering the most recent audited accounts, estimates of actuals during the base year checked for prudence and any other factors considered appropriate by the Commission, and

- (b) Proposed capitalisation during the year, checked for prudence covering-
  - (i) schemes for which Commission's approval has been granted,
  - (ii) schemes which have been submitted for Commission's approval, and
  - (iii) schemes not requiring Commission's approval.

Less-

Assets proposed to be retired during the year.

(2) The interest on loan capital and return on equity shall be computed on the financing of the cost of the schemes included in the asset base.

#### **18. Debt-equity ratio**

For the purpose of determination of the tariff, the equity and outstanding debt as determined for the base year by the Commission shall be considered as given. However, for any fresh capitalization of assets, the Commission shall apply a debt-equity ratio of 70:30 on the capitalised amount as approved by the Commission for each year of the control period:

Provided that where equity employed is in excess of 30%, the amount of equity for the purpose of tariff shall be limited to 30% and the balance amount shall be considered as loan. The interest rate applicable on the equity in excess of 30% treated as loan has been specified in regulation 20. Where actual equity employed is less than 30%, the actual equity shall be considered.

#### **19. Return on Equity**

- (1) Return on equity shall be computed on the equity determined in accordance with regulation 18 and on pre-tax basis at the base rate of 15.5% to be grossed up as per sub-regulation (3) of this regulation:
- (2) The rate of return on equity shall be computed by grossing up the base rate with the normal tax rate for the year 2010-11 applicable to the concerned transmission licensee company:

Provided that return on equity with respect to the actual tax rate applicable to the transmission licensee in line with the provisions of the relevant Finance Acts of the respective year during the tariff period shall be trued up separately for each year of the tariff period along with the tariff petition filed for the next tariff period.

- (3) Rate of return on equity shall be rounded off to three decimal points and be computed as per the formula given below:-
  - (a) Rate of pre-tax return on equity = Base rate /(1-t)
  - (b) Where t is the applicable tax rate in accordance with sub-regulation (2) of this regulation.

## Illustration.-

 (i) In case of the transmission licensee paying Minimum Alternate Tax (MAT) @ 19.93% including surcharge and cess:

Rate of return on equity = 15.50/ (1-0.1993) = 19.358%

(ii) In case of transmission licensee company paying normal corporate tax@ 33.22% including surcharge and cess:

Rate of return on equity = 15.50/(1-0.3399) = 23.481%

#### **20. Interest and Finance Charges**

- (1) Interest and finance charges on loan capital shall be computed on the outstanding loans, duly taking into account the schedule of repayment in accordance with the terms and conditions of relevant agreements of loan, bond or non-convertible debentures. Exception can be made for the existing or past loans which may have different terms as per the agreements already executed if the Commission is satisfied that the loan has been contracted for and applied to identifiable and approved projects.
- (2) 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:

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:

Provided further that if the transmission licensee does not have actual loan then the weighted average rate of interest of the transmission licensee as a whole shall be considered.

(3) 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 rate of return on equity specified in these regulations:

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

Provided further that the interest and finance charges of re-negotiated loan agreements shall not be considered, if they result in higher charges:

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

Provided further that neither penal interest nor overdue interest shall be allowed for computation of tariff.

- (4) In case any moratorium period is availed of in any loan, 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 capital shall be calculated accordingly.
- (5) The transmission licensee shall make every effort to refinance the loan as long as it results in net benefit to the beneficiaries. The costs associated with such refinancing shall be borne by the transmission customers and any benefit on account of refinancing of loan and interest on loan shall be passed on to the transmission customers. Refinancing may also include restructuring of debt.
- (6) In respect of foreign currency loans, variation in rupee liability due to foreign exchange rate variation, towards interest payment and loan repayment actually incurred, in the relevant year shall be admissible; provided it directly arises out of such foreign exchange rate variation and is not attributable to the transmission licensee or its suppliers or contractors.

## 21. Working Capital

The Commission shall calculate the working capital requirement for the transmission licensee containing the following components: -

- (a) O&M expenses for 1 month;
- (b) maintenance spare @ 40% of repair and maintenance expenses for one month; and
- (c) receivables for two months based on the projected annual transmission charges.

## 22. Interest Charges on Working Capital

Rate of interest on working capital to be computed as provided hereinafter in these regulations shall be on normative basis and shall be equal to the Short Term Prime Lending Rate of the State Bank of India as on 1<sup>st</sup> April of the relevant year. The interest

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

## 23. Depreciation

- (1) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission.
- (2) The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset.
- (3) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-I to these regulations for the assets of the transmission system:

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

- (4) For transmission project which are in operation for less than 12 years, the difference between the cumulative depreciation recovered and the cumulative depreciation arrived at by applying the depreciation rates specified in this regulation corresponding to 12 years, shall be spread over the period up to 12 years, and the remaining depreciable value as on 31<sup>st</sup> March of the year closing after a period of 12 years from date of commercial operation shall be spread over the balance useful life of the asset.
- (5) For the project in operation for more than 12 years, the balance depreciation to be recovered shall be spread over the remaining useful life of the asset.
- (6) 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 pro rata basis.

## 24. Non-tariff Income

- (1) All income 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, income from investments (other than investment of equity), and miscellaneous receipts from the transmission customers excluding income to licensed business from the other business of the transmission licensee shall constitute non-tariff income of the licensee.
- (2) The amount projected by the licensee on account of non-tariff income shall be deducted from the aggregate revenue requirement in calculating the net revenue requirement of the licensee.

## 25. Other Income of the Transmission Licensee

Where the transmission licensee is engaged in any other business, the income from such business will be calculated in accordance with the Himachal Pradesh Electricity Regulatory Commission (Treatment of Income of Other Businesses of Transmission Licensees and Distribution Licensees) Regulations, 2005 and shall be deducted from the aggregate revenue requirement in calculating the revenue requirement of the transmission licensee:

Provided that the transmission licensee shall follow a reasonable basis for allocation of all joint and common costs between the transmission business and the other business and shall submit the allocation statement, as approved by its board of directors, to the Commission along with his application for determination of tariff:

Provided further that where the sum total of the direct and indirect costs of such other business exceeds 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.

## 26. Refund of excess amount

The licensee shall recover the charges as determined by the Commission. Where any licensee recovers charges exceeding those determined by the Commission, the excess amount shall be refunded to the person who has paid such excess charges, alongwith interest equal to the prevalent Short Term Prime Lending rate of the State Bank of India without prejudice to any other liability incurred by such licensee.

## 27. Late Payment Surcharge

In case the payment of bills of transmission charges is delayed beyond a period of one month from the date of billing, the transmission licensee may levy a late payment surcharge at the rate of 1.25% per month.

## 28. Rebate

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

## **29. Quality of Supply**

- (1) The Commission shall monitor the following quality of supply parameters during the control period: -
  - (a) transmission system availability;

- (b) 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.
- (2) The transmission licensee in its business plan filings shall submit and propose the trajectory for the achievement of quality targets. The Commission will lay down the targets for each parameter in the MYT order. The transmission licensee shall submit its performance on each parameter in the form and manner laid down by the Commission.

## **30. Safety Standards**

The transmission licensee shall develop a safety manual and follow procedures to maintain atleast minimum safety standards during construction, operation, etc. in line with provisions of section 53 of the Act.

# PART-IV

# PRINCIPLES FOR DETERMINATION OF TRANSMISSION TARIFF/ CHARGES

## **31. Transmission Tariff / Charges**

- (1) The transmission charges payable by the transmission customers of the transmission system shall be designed to recover the aggregate revenue requirement computed as annual transmission charges by the Commission for each year of the control period.
- (2) In addition to transmission charges, charges for reactive energy, as may be determined by the Commission in the MYT order, shall also be payable by all the transmission customers of the system.

## 32. Annual Transmission Service Charge

- (1) 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.
- (2) The transmission charge (inclusive of incentive) payable for a calendar month for a transmission system or part thereof shall be-

AFC x ( NDM / NDY ) x ( TAFM / NATAF )

Where,

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

NATAF = Normative annual transmission availability factor, in per cent specified in regulation 11;

NDM = Number of days in the month;

NDY = Number of days in the year; and

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

(3) 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:

Provided that wherever it is necessary or expedient to incentivise the open access, the Commission may, by order, cap the transmission charges calculated under this sub-regulation.

## **33.** Allocation of Transmission Service Charge and Losses

- (1) 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.
- (2) No distinction in charges shall exist in terms of long term, medium term or short term access to the intra-State transmission system:

Provided that the transactions for long term and medium term shall be denominated in Rs/kW/month or any suitable denomination as may be stipulated by the Commission.

- (3) For short term bilateral transactions and short term collective transactions through power exchanges, the transmission tariff shall be denominated in Rs/kWh.
- (4) 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.
- (5) The energy losses in the transmission system of the transmission licensee, as determined by the State Load Despatch Centre and approved by the Commission, shall be

apportioned between users in proportion to their usage of the intra-State transmission system.

(6) 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.

## 34. Charges for intervening transmission facilities

(1) The rates and charges for intervening transmission facilities, if any, provided by the licensee shall be as mutually agreed upon between the licensee and the users of such facilities:

Provided that the rates and charges agreed upon shall be fair and reasonable and may be allocated in proportion to the use of the transmission facilities.

- (2) Mutual agreement on these matters would be in the best interest of the parties. In case, such agreement cannot be reached within a reasonable period of time, either party shall be entitled to approach the Commission for determination under the proviso to sub-section (1) of section 36 of the Act and the Commission would expect evidence that negotiations were held in good faith and all reasonable efforts were made to arrive at a mutual agreement.
- (3) The parties shall be at liberty to approach the Commission in case of any dispute regarding the extent of surplus capacity available, as provided for in section 35 of the Act.
- (4) An application shall be made to the Commission for an order requiring any other licensee owning or operating intervening transmission facilities to provide their use to the extent of surplus capacity available with it.
- (5) After an order is passed under sub-regulation (4) of regulation 34, read with section 35 of the Act, the concerned licensee shall provide his intervening transmission facilities at rates, charges and on terms and conditions as may be mutually agreed upon, under section 36 of the Act.

## **35.** Compliance with the directions by Transmission Licensee

- (1) Subject to the directions issued by the National Load Despatch Centre or the Regional Load Despatch Centre, the State Load Despatch Centre (SLDC) may, under sub-section (2) of section 32 and sub-section (1) of section 33, read with clause (b) of section 40 of the Act, give such directions as it may consider appropriate, for maintaining the availability of the transmission system and the transmission licensee shall duly comply with all such directions.
- (2) The Commission, on an application filed by the State Load Despatch Centre (SLDC) and after hearing the transmission licensee, if satisfied that the

transmission licensee has persistently failed to maintain the availability of the transmission system, may issue such directions to the State Load Despatch Centre (SLDC) to take control of the operations of the transmission system of such transmission licensee, for such period and on such terms, as the Commission may decide.

(3) The directions under sub-regulations (1) and (2) of regulation 35 shall be without prejudice to any action which may be taken against the transmission licensee under other provisions of the Act.

## PART-V

# MULTI YEAR TARIFF FILING PROCEDURE

## 36. Multi-Year Filings for the Control Period

- (1) The multi year tariff filing shall be in such form and in such manner as may be laid down by the Commission by an order and also as per the provisions of the Conduct of Business Regulations.
- (2) The transmission licensee shall also submit the multi year tariff filing in electronic format to the Commission.

## 37. Beginning of the Control Period - Business Plan Filings

The transmission 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 its board of directors. The business plan shall be for the entire control period and shall, interalia, contain -

- (a) 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; The Commission shall approve the system augmentation/ expansion plan submitted by the transmission licensee, based on the load growth forecast/ generation evacuation requirement during the control period. The capital investment plan shall be in conformity with the plans made by the CEA/ CTU/ STU/ distribution licensee.
- (b) **Capital Structure:** The appropriate capital structure of each scheme proposed and cost of financing (interest on debt) and return on equity, terms of the existing loan agreements, etc;
- (c) **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 mechanism;

- (d) **Depreciation:** Based on the on the useful life of the asset and capitalisation schedules for each year of the control period;
- (e) **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 for each year of the control period for the purpose of incentive / penalties. The targets shall be consistent with the capital investment plan proposed by the transmission licensee;
- (f) Proposals for Non-tariff Income with item-wise description and details;
- (g) Proposals in respect of income from Other Business;
- (h) **Other Information:** This shall include any other details considered appropriate by the transmission licensee for consideration during determination of tariff.

#### **38.** Tariff Filing

- (1) 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.
- (2) The transmission tariff shall be determined for each year of the control period at the beginning of the control period. The licensee shall propose capacity based wheeling tariff. The licensee shall also indicate the transmission losses voltage-wise to provide for adjustment of losses in the system.
- (3) The filings for transmission tariff shall contain the following: -
  - (a) the transmission system or network usage forecast for each year of the control period, consistent with the business plan;
  - (b) proposals for transmission tariff design for each year of the control period, including the losses to be charged and the procedure thereof;
  - (c) proposal for transmission tariff rate for the each year of the control period supported by adequate justification;
  - (d) proposal for reactive energy charges; and

- (e) expected revenue from the licensed business, non-tariff income and income from other business and other matters considered appropriate by the transmission licensee.
- (4) The licensee shall furnish to the Commission, such additional information, particulars and documents as the Commission may require from time to time after such filing of revenue calculations and tariff proposals.
- (5) The licensee shall publish, for the information of the public, the contents of the application in an abridged form in such manner as the Commission may direct and shall host the complete copy of the filing on its website and shall also provide copies of the documents filed with the Commission to any person at a price not exceeding normal photocopying charges.

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

- (1) Towards the end of the control period, the Commission shall 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 the 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.
- (2) 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.

## **40.** Disposal of Application

- (1) The Commission will process the filings made by the transmission licensee in accordance with these regulations and the Conduct of Business regulations.
- (2) Based on the transmission licensee's filings, objections/ suggestions from public and other stakeholders, the Commission may, within 120 days of the receipt of the application, complete in all respects, and after considering all suggestions and objections from public and other stakeholders, -
  - (a) issue, a tariff order with such modifications and/or such conditions, as may be deemed just and appropriate containing, inter-alia targets for controllable items and transmission tariffs for each year of the control period; or
  - (b) reject the application for reasons to be recorded in writing if such application is not in accordance with the provisions of the Act and the rules and

regulations made thereunder or the provisions of any other law for the time being in force.

## 41. Publication

The transmission licensee shall publish the tariff approved by the Commission in the newspapers, having circulation in the area of supply, as the Commission may direct. The publication shall, besides such other things as the Commission may require, include a general description of the tariff changes.

## PART-VI

## MISCELLANEOUS

#### 42. Sharing of Clean Development Mechanism (CDM) Benefits

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

- (a) 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;
- (b) 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.

## 43. Tax on Income

In view of pre tax return on equity, tax on the income streams of the transmission licensee shall not be recovered from the beneficiaries:

Provided that the deferred tax liability, excluding Fringe Benefit Tax, for the period up to 31st March, 2011 whenever it materialises, shall be recoverable directly from the beneficiaries and the long-term customers.

## 44. Foreign Exchange Rate Variation.

- (1) 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.
- (2) Every 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.

- (3) 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.
- (4) Every 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.

## 45. Recovery of cost of hedging Foreign Exchange Rate Variation

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:

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.

## 46. Transitory provisions-

Notwithstanding anything to the contrary contained in these regulations -

- (a) the tariff order issued by the Commission for the control period ending on the 31st March, 2011 shall continue to operate; and
- (b) the proceedings (including review petition) for amendments, revocation, variation or alteration of the said tariff order shall continue to be filed and dealt with as if the repealed regulations in respect of the said tariff determination continue to be inforce, and the provisions of these regulations shall not apply.

## **47. 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, prescribe formats 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 person, to determine the tariff of any applicant.

## **48.** Power to remove difficulties

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 transmission licensee to do or undertake such things which appear to be necessary or expedient for the purpose of removing the difficulties.

## **49.** Power of relaxation

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

## 50. Interpretation

All issues arising in relation to the interpretation of these regulations shall be determined by the Commission and the decision of the Commission on such issues shall be final.

## **51.** Saving of Inherent Powers of the Commission

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.

## **52. Enquiry and Investigation**

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

## **53. Repeal and Savings**

- (1) The Himachal Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2007 are hereby repealed.
- (2) Notwithstanding such repeal-
  - (a) anything done or any action taken or purported to have been done or taken under the repealed regulations shall, in so far as it is not inconsistent with the provisions of these regulations, be deemed to have been done or taken under the corresponding provisions of these regulations;

- (b) the provisions concerning the tariff order made for the control period ending on the 31st March, 2011 and the provisions for conduct of the proceedings (including review petitions) for its revocations, variation or alternation as, stood before such repeal, shall continue to be in force.;
- (c) the provisions relating to the State Load Despatch Centre (SLDC) Fees and Charges, as contained in Part-V of the repealed regulations shall continue to apply till the Commission notifies separate regulations covering the said aspects.

By Order of the Commission,

Sd/-Secretary

# **Appendix I: Depreciation Schedule (see Regulation 23)**

No	Asset Particulars	Depreciation Rate (Salvage Value=10%)
А	Land under full ownership	0.00%
В	Land under lease	
(a)	For investment in land	3.34%
(b)	For cost of clearing the site	3.34%
С	Assets purchased new	
(i)	Buildings and civil engineering works of a permanent character, not mentioned above:	
(ii)	Offices and showrooms	3.34%
(iii)	Temporary erection such as wooden structures	100.00%
(iv)	Roads other than kutcha roads	3.34%
(v)	Others	3.34%
D	Transformers, transformer (kiosk) sub-station equipment and 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%
Е	Switchgear, including cable connections	5.28%
F	Lightning arrestors:	5.28%
(i)	Station type	5.28%
(ii)	Pole type	5.28%
(iii)	Synchronous condenser	5.28%
G	Batteries	5.28%
(i)	Underground cable including joint boxes and disconnected boxes	5.28%
(ii)	Cable duct system	5.28%
Н	Overhead lines including supports:	
(i)	Lines on fabricated steel operating at nominal voltages higher than 66 kV	5.28%
(ii)	Lines on steel supports operating at nominal voltages higher than 13.2 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%
Ι	Meters	5.28%

# **Transmission Tariff Regulations**

No	Asset Particulars	Depreciation Rate (Salvage Value=10%)
J	Self propelled vehicles	9.50%
Κ	Air conditioning plants:	
(i)	Static	5.28%
(ii)	Portable	9.50%
L(i)	Office furniture and fittings	6.33%
(ii)	Office equipments	6.33%
(iii)	Internal wirings including fittings and apparatus	6.33%
(iv)	Street Light fittings	5.28%
М	Apparatus let on hire:	
(i)	Other than motors	9.50%
(ii)	Motors	6.33%
Ν	Communication equipment	
(i)	Radio and higher frequency carrier systems	6.33%
(ii)	Telephone lines and telephones	6.33%
0	I.T Equipment	15.00%
Р	Any other assets not covered above	5.28%

## **Appendix II - Procedure for Calculation of Transmission System Availability Factor for a Month (See Regulation 32(2))**

1. Transmission System Availability Factor for a calendar month (TAFM) shall be calculated by the 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 x 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:

 $NAFM = \begin{bmatrix} I_{l=1} \sum^{L} (OH \ l \ x \ Ckt. \ km \ l \ x \ NSC \ l) + I_{t=1} \sum^{T} (OH \ t \ x \ MVA \ t \ x \ 2.5) + I_{r=1} \sum^{R} (OH \ r \ x \ MVAR \ r \ x \ 4)] / THM \ x \ I_{l=1} \sum^{L} (Ckt. \ km \ l \ x \ NSC \ l) + I_{t=1} \sum^{T} (MVA \ t \ x \ 2.5) + I_{r=1} \sum^{R} (MVAR \ r \ x \ 4)]$ 

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:-

- (1) 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.
- (2) 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.

- (1) 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.
- (2) 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 will be considered not available for the period of outage after issuance of SLDC's direction for restoration.