

- (ii) Expenses on replacement or removal of plant or works other than expenses required for normal maintenance or renewal;
- (iii) Compensation payable under any law for the time being in force and for which no other provision is made:

Provided that such drawal from contingency reserve shall be computed after making due adjustment for any other compensation that may have been received by the Licensee as part of an insurance cover:

- (c) No diminution in the value of contingency reserve as mentioned above shall be allowed to be adjusted as a part of tariff.

### **29. Bad and Doubtful Debts :**

Bad and Doubtful Debts shall be allowed as a legitimate business expense provided the transmission licensee actually identifies and writes off bad debts as per the transparent policy approved by the Commission. In case there is any recovery of bad debts already written off, the recovered bad debt will be treated as other income as an uncontrollable item.

### **30. Non-Tariff Income**

- (i) 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, income from investments other than contingency reserves, miscellaneous receipts from the Beneficiaries, income to Licensed business from the Other Business of the Transmission Licensee or SLDC, as the case may be, shall constitute Non-Tariff Income of the Licensee.

Provided that the interest earned from investments made out of Return on Equity corresponding to the regulated Business shall not be included in Non-Tariff Income.

- (ii) 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.

### **31. Income from Other Business**

Where the Transmission Licensee is engaged in any other business under Section 41, the income from such business will be deducted from the Aggregate Revenue Requirement in calculating the revenue requirement of the Licensee in the manner and in proportion as may be specified by the

Commission in BERC (Treatment of Income of Other Businesses of Transmission Licensees and Distribution Licensees) Regulations, 2013 and its amendments from time to time.

Provided that the 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 the application for determination of tariff;

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

### **32. Annual Transmission Charges (ATC)**

32.1 The annual Transmission charges 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.

32.2 The Transmission charge (inclusive of incentive/ disincentive) for AC system payable for a calendar month shall be:

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

Where;

NATAF= 98%

NDM = Number of days in the month

NDY = Number of days in the year

TAFM = Transmission System availability factor for the month, in percent computed in accordance with Appendix-II.

### **33. Sharing of charges for Intra-State Transmission Network**

33.1 The Aggregate Revenue Requirement of the Transmission Licensee, as approved by the Commission, shall be shared by all long-term users and medium-term users of the transmission system on monthly basis in the ratio of their respective contracted transmission capacities to the total contracted transmission capacity, in accordance with the following formula:

$TC_n = (\text{Transmission ARR net of incentive/disincentive}) \times (\text{NDM/NDY}) \times \text{CC}_n / \text{SCC}$

Where,

$TC_n$  = transmission charges for the month payable by the nth long-term user or medium-term user of the transmission system;

Transmission ARR = Aggregate Revenue Requirement of the Transmission Licensee, determined in accordance with Regulation 68 of these Regulations;

$CC_n$  = capacity contracted in MW by the nth long-term user or medium-term user of the transmission system during the month;

SCC = sum of capacities contracted in MW by all long-term users and medium-term users of the transmission system during the month:

NDM=Number of days in the month

NDY=Number of days in the year

Provided that the  $TC_n$  shall be payable on monthly basis by each long-term user or medium-term user of the transmission system and shall be collected by the State Transmission Utility (STU).

#### 34. **Sharing of SLDC Charges**

34.1 The SLDC Charges payable by the Transmission System Users shall be computed in accordance with the following formula:-

SLDC Charges payable for a month  $SC_n = (\text{SC} / 12) \times (\text{AC}_n / \text{SAC}_n)$

Where,  $SC_n$  = SLDC charge payable by Transmission System users

SC = Approved SLDC Aggregate Revenue Requirement for the year

$AC_n$  = Actual installed capacity of nth Transmission System users in case of generating stations/long term and medium term contracted capacities in case of sellers/aggregated allocated capacity and contracted capacity in case of distribution licensee/long term contracted capacity in case of buyer.

$SAC_n$  = Sum of actual installed capacity of nth Transmission System users in case of generating stations (within Bihar), long term and medium term contracted capacities in case of sellers, aggregated allocated

capacity and contracted capacity in case of distribution licensee and long term contracted capacity in case of buyer.”

34.2 The SLDC Charges approved for the Year shall be equally spread over the 12 months of the Year and SLDC Charges per MW per month shall be computed by SLDC accordingly.

34.3 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 charges of the transmission licensee.

### **35. Short-term bilateral transactions and short-term collective transactions**

35.1 For short-term bilateral transactions and short-term collective transactions through power exchanges, the transmission tariff shall be denominated in Rs/kWh and shall be:

$$T_c = \text{ARR}/E_i$$

Where  $E_i$  = total energy input into the intra-State transmission system during the financial year.

35.2 The revenue from short-term open access charges for each yearly period (t) of Control Period shall be taken to be same as that prevalent during the yearly period one year before the commencement of the Control Period. However, the adjustments due to variation in actual revenue from short-term open access charges shall be undertaken during annual truing up.

### **36. Separation of Transmission and SLDC functions**

36.1 The Transmission Licensee shall separate its business into transmission and SLDC functions, and segregate its accounts between these two businesses, once the accounts of these two businesses are segregated SLDC shall file a separate application for determination of its fee and charges in accordance with these regulations.

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.

36.2 SLDC charges shall be payable by various utilities as may be determined by the Commission in accordance with these Regulations.

Provided that the RLDC Fees and Charges payable by the SLDC in accordance with the relevant Orders issued by the Central Electricity Regulatory Commission from time to time shall be allowed to be recovered by the SLDC through the Fees and Charges as approved by the Commission.

Provided further that, the ERPC Charges payable to the ERPC's Secretariat shall be allowed to be recovered by the SLDC through the Fees and Charges as approved by the Commission.

36.3 The SLDC shall have to produce documentary proof towards payment of such Charges at the time of Truing up.

Provided that any variation between the approved RLDC Fees and Charges and ERPC Charges and that actually paid by the SLDC shall be considered during the true-up as per audited accounts, subject to prudence check and any other factor considered appropriate by the Commission.

### **37. Incentive/Disincentive**

37.1 The Transmission Licensee shall be entitled to incentive/disincentive on account of deviation from target availability as well as transmission Loss target set by commission. However, the incentive/disincentive on account of deviation from transmission loss target shall be +/- 0.01% of ARR for deviation of 0.01% of transmission loss limited to +/- 2% of the ARR.

The transmission charges referred to in Regulation 32 of these Regulations are inclusive of such incentives and disincentives on account of availability of system.

37.2 Incentive shall be shared by the long-term and medium term customers in the ratio of their respective contracted transmission capacities to the total contracted transmission capacity.

### **38. Rebate**

- (1) For payment of bills of the transmission licensee through letter of credit on presentation or through NEFT/RTGS within a period of 2 days of presentation of bills by the transmission licensee, a rebate of 2% shall be allowed.
- (2) Where payments are made on any day after 2 days and within a period of 30 days of presentation of bills by the transmission licensee, a rebate of 1% shall be allowed.

## **PART-VI**

### **MISCELLANEOUS**

#### **39. Power to amend**

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

#### **40. Power to remove difficulties**

If any difficulty arises in giving effect to the provisions of these Regulations, the Commission may, by general or specific order, make such provisions not inconsistent with the provisions of the Act, as may appear to be necessary for removing the difficulty.

#### **41. Right to vary terms and conditions**

The terms and conditions for determination of tariff specified in these regulations are in the nature of general framework on the basis of which the tariff shall be determined. The Commission reserves its right to vary these terms and conditions, as and when deems fit.

#### **42. Limitation of Power of Commission**

Nothing in these regulations shall be deemed to limit the powers of the Commission to deal with any matter or exercise any power under the relevant Acts for which no regulations have been made / framed and to make such orders as it may consider appropriate to meet the ends of justice in any case.

#### **43. Repeal and savings**

- (a) Save as otherwise provided in these regulations, BERC (Multi Year Transmission Tariff and SLDC Charges) Regulations, 2018 are hereby repealed.

(b) Notwithstanding such repeal, any proceedings before the Commission pertaining to the period prior to the commencement of this Control Period, including Petitions for True up of exercises, annual performance review, etc. shall be governed by respective previous regulations.

By order of the Commission,

Sd/-  
Secretary.

**Appendix-I**  
**(See Reg. 16.2)**

**FORMAT FOR ISSUANCE OF AVAILABILITY CERTIFICATE BY SLDC**  
**On the letterhead of SLDC**

Ref:

To

.....  
.....

Date:

**Sub: Transmission System Availability Certificate for.....**  
**(Name of Transmission Licensee) for the month.....**

Ref: ...

With reference to the above, SLDC has received the computation of transmission system availability with interruption details of Transmission network for the month\_\_\_\_\_, computed in accordance with the BERC (Multi Year Transmission Tariff) Regulations,2021.

The overall Transmission System Availability of the Transmission network for the month \_\_\_\_\_, computed in accordance with Appendix-II of the BERC (MYT) Regulations, 2021, and after considering the provisions of BERC (MYT) Regulations, 2021, is \_\_\_\_\_ %.

Authorised Signatory

Copy to \_\_\_\_\_



**Appendix-II**  
**(See Reg. 16.2)**

1. Transmission system availability factor for a calendar month (TAFM) shall be calculated by the respective Transmission Licensee certified by the SLDC, separately for each AC and HVDC transmission system and grouped according to sharing of transmission charges.
  
2. NAFM for A.C. and HVDC system / sub-systems shall be calculated as follows:

$$\begin{aligned} &\% \text{ TAFM for AC system} \\ &o \times AV_o + p \times AV_p + q \times AV_q + r \times AV_r \\ &= \frac{\quad}{o + p + q + r} \times 100 \end{aligned}$$

% TAFM for HVDC system

$$\begin{aligned} &s \times AV_s + t \times AV_t \\ &= \frac{\quad}{S + t} \times 100 \end{aligned}$$

Where

o = Total number of AC lines.

AV<sub>o</sub> = Availability of o number of AC lines.

p = Total number of bus reactors/switchable line reactors

AV<sub>p</sub> = Availability of p number of bus reactors/switchable line reactors

q = Total number of ICTs.

AV<sub>q</sub> = Availability of q number of ICTs.

r = Total number of SVCs.

AV<sub>r</sub> = Availability of r number of SVCs.

s = Total number of HVDC poles

AV<sub>s</sub> = Availability of s number of HVDC poles

t = Total number of HVDC back-to-back station blocks

AV<sub>t</sub> = Availability of t number of HVDC back-to-back station blocks

The weightage factor for each category of transmission elements shall be as under:

- (a) For each circuit of AC line – Surge Impedance Loading for Uncompensated line (SIL) multiplied by ckt-km. As specified in Annexure-B.

However, for the voltage levels and/or conductor configurations not listed in Annexure-B, appropriate SIL based on technical considerations may be used for availability calculation under intimation to long-term transmission customers.

For compensated AC line, Surge Impedance Loading (SIL) shall be as certified by the SLDC considering the compensation on the line.

For shunt compensated line the reduced value of SIL shall be taken in accordance with the location of the reactor. Similarly in case of the lines with series compensation the higher SIL shall be taken as per the percentage of compensation.

- (b) For each HVDC pole- The rated MW capacity x ckt-km.  
 (c) For each ICT bank – The rated MVA capacity.  
 (d) For SVC- The rated MVAR capacity (inductive and capacitive).  
 (e) For Bus Reactor/switchable line reactors – The rated MVAR capacity.  
 (f) For HVDC back-to-back station connecting two Regional grids/Intra State Sub-Stations- Rated MW capacity of each block.

The availability for each category of transmission elements shall be calculated based on the weightage factor, total hours under consideration and non-available hours for each element of that category.

**FORMULAE FOR CALCULATION OF AVAILABILITY OF EACH CATEGORY OF TRANSMISSION ELEMENTS**

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

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

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

$$AV_r(\text{Availability of } r \text{ no. of SVCs}) =$$

$$\frac{\sum_{i=1}^r \frac{0.5W_{il}(T_{il} - T_{NAil})}{T_{il}} + \sum_{i=1}^r \frac{0.5 W_{cl}(T_{cl} - A_{cl})}{T_{cl}}}{\sum_{i=1}^r 0.5W_{il} + \sum_{i=1}^r 0.5 W_{cl}}$$

AV<sub>p</sub>(Availability of p no. of Switched Bus Reactor)=

$$\frac{\sum_{m=1}^p \frac{W_m(T_m - T_{NA_m})}{T_m}}{\sum_{m=1}^p W_m}$$

AV<sub>t</sub> (Availability of t no. of HVDC Back-to back Blocks=

$$\frac{\sum_{n=1}^t \frac{W_n(T_n - T_{NA_n})}{T_n}}{\sum_{n=1}^t W_n}$$

Where  $W_i$  = Weightage factor for  $i$ th transmission line

$W_j$  = Weightage factor for  $j$ th HVDC pole

$W_k$  = Weightage factor for  $k$ th ICT

$W_{il}$  &  $W_{cl}$  = Weightage factors for inductive & capacitive operation of  $l$ th SVC

$W_m$  = Weightage factor for  $m$ th bus reactor

$W_n$  = Weightage factor for  $n$ th HVDC back to back block

$T_i, T_j, T_k, T_{il}, T_{cl}, -$  The total hours of  $i$ th AC line,  $j$ th HVDC pole,  $k$ th ICT,  $l$ th SVC  $T_m$  &  $T_n$  (Inductive Operation),  $l$ th SVC (Capacitive Operation),  $m$ th Switched Bus Reactor &  $n$ th HVDC back-to-back block during the period under consideration (excluding time period for outages not attributable to transmission licensee .

$T_{NAi}, T_{NAj}, T_{NAk} -$  The non-availability hours (excluding the time period for outages not attributable to transmission licensee taken as deemed availability) for  $i$ th AC line,  $j$ th HVDC pole,  $K$ th ICT,  $l$ th SVC (Inductive Operation),  $l$ th SVC (Capacitive Operation),  $m$ th Switched Bus Reactor and  $n$ th HVDC back-to-back block.

$T_{NAil}, T_{NAcl}, T_{NA_m}, T_{NA_n}$

**Note :-**

*"Factors have been applied in the above formula of NAFM such that a 315 MVA transformer would have the same weightage as a 200 km long D/C line with twin conductors, and a 50 MVAR switched reactor would have one-fourth the weightage of a 315 MVA transformer. The transmission lines shall have a weightage proportional to their circuit – km and number of sub-conductors (to which the current carrying capacity is directly proportional). Voltage has been omitted by design for the present, to deliberately enhance the weightage for 220 kV and 132 kV lines (as they are critical for supply to beneficiaries), and to suppress the weightage for 765 kV lines (since they presently carry power much below their capability). The Commission may review and modify the formula when the situation changes in future".*

4. The transmission elements under outage due to following reasons shall be deemed to be available:
  - i. Shut down availed for maintenance or construction of elements of another transmission scheme. If the other transmission scheme belongs to the Transmission Licensee, SLDC may restrict the deemed availability period to that considered reasonable for the work involved.
  - ii. 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.
  - i. Outage of elements due to acts of God and force majeure events beyond the control of the Transmission Licensee. However, onus of satisfying the 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.

- ii Outage caused by grid incident/disturbance not attributable to the Transmission Licensee, e.g. faults in substation or bays owned by other agency causing outage of the transmission licensee's elements, and tripping of lines, ICTs, HVDC, 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.
6. The format for issuance of Availability Certificate by SLDC is given in Appendix-I.