Sl. No.	Clause No.	Existing Provisions	New/Revised Provisions
1.	Definitions of Availability of Article 1.1.1 of TSA	**"Availability"** in relation to the Project or in relation to any Element of the Project, for a given period shall mean the time in hours during that period the Project 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 per the procedure contained in **Appendix –II to Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019,** attached herewith in Schedule 6;	**"Availability"** in relation to the Project or in relation to any Element of the Project, for a given period shall mean the time in hours during that period the Project 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 per the procedure contained in **Appendix –IV to Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024,** attached herewith in Schedule 6;
2.	Article 8.1 of TSA	**Calculation of Availability of the Project:** Calculation of Availability for the Elements and for the Project, as the case may be, shall be as per **Appendix – II to Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019,** as applicable on the Bid Deadline and as appended in Schedule 6 of this Agreement.	**Calculation of Availability of the Project:** Calculation of Availability for the Elements and for the Project, as the case may be, shall be as per **Appendix –IV to Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024,** as applicable on the Bid Deadline and as appended in Schedule 6 of this Agreement.
3.	Article 11.7 (c) of TSA	For the avoidance of doubt, it is clarified that the computation of Availability of the Element(s) under outage due to Force Majeure Event, as per Article 11.3 affecting the TSP shall be as per **Appendix –II to Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019** as on Bid Deadline. For the event(s) for which the Element(s) is/are deemed to be available as per **Appendix –II to Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019,** then the Transmission Charges, as applicable to such Element(s), shall be payable as per Schedule 4, for the duration of	For the avoidance of doubt, it is clarified that the computation of Availability of the Element(s) under outage due to Force Majeure Event, as per Article 11.3 affecting the TSP shall be as per **Appendix –IV to Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024** as on Bid Deadline. For the event(s) for which the Element(s) is/are deemed to be available as per **Appendix –IV to Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024,** then the Transmission Charges, as applicable to such Element(s), shall be payable as per Schedule 4, for the duration of such event(s).

Sl. No.	Clause No.	Existing Provisions	New/Revised Provisions
		such event(s).	
4.	**Schedule: 6 of TSA**	Existing Schedule 6 of TSA	New/Revised Schedule 6 **(Enclosed at Annexure – A)**

Annexure – A

Schedule: 6

Appendix –IV to Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024

Procedure for Calculation of Transmission System Availability Factor for a Month

1. Transmission system availability factor for nth calendar month ("TAFPn") shall be calculated by the respective transmission licensee, verified by the concerned Regional Load Dispatch Centre (RLDC) and certified by the Member-Secretary, Regional Power Committee of the region concerned, separately for each AC and HVDC transmission system and grouped according to sharing of transmission charges. In the case of the AC system, transmission System Availability shall be calculated separately for each Regional Transmission System and inter-regional transmission system. In the case of the HVDC system, transmission System Availability shall be calculated on a consolidated basis for all inter-state HVDC systems.

2. Transmission system availability factor for nth calendar month ("TAFPn") shall be calculated by considering the following:

    i) **AC transmission lines**: Each circuit of AC transmission line shall be considered as one element;

    ii) **Inter-Connecting Transformers (ICTs):** Each ICT bank (three single-phase transformers together) shall form one element;

    iii) **Static VAR Compensator (SVC):** SVC, along with SVC transformer, shall form one element;

    iv) **Bus Reactors or Switchable line reactors:** Each Bus Reactors or Switchable line reactors shall be considered as one element;

    v) **HVDC Bi-pole links:** Each pole of the HVDC link, along with associated equipment at both ends, shall be considered as one element;

    vi) **HVDC back-to-back station:** Each block of the HVDC back-to-back station shall be considered as one element. If the associated AC line (necessary for the transfer of inter-regional power through the HVDC back-to-back station) is not available, the HVDC back-to-back station block shall also be considered unavailable;

vii) **Static Synchronous Compensation ("STATCOM"):** Each STATCOM shall be considered as a separate element.

3. The Availability of the AC and HVDC portion of the Transmission system shall be calculated by considering each category of transmission elements as under:

TAFPn (in %) for AC system:

$$= \frac{(o \times AVo)+(p \times AVp) + (q \times AVq) + (r \times AVr)+(u \times AVu)}{(o + p + q + r+u)} \times 100$$

Where,

o	=	Total number of AC lines.
AVo	=	Availability of o number of AC lines
p	=	Total number of bus reactors/switchable line reactors
AVp	=	Availability of p number of bus reactors/switchable line reactors
q1	=	Total number of ICTs
AVq	=	Availability of q number of ICTs
r	=	Total number of SVCs
AVr	=	Availability of r number of SVCs
u	=	Total number of STATCOM
AVu	=	Availability of u number of STATCOM

TAFMn (in %) for HVDC System:

$$= \frac{\sum_{x=1}^{s} Cxbp\,(act)\ X\ AVxbp + \sum_{y=1}^{t} Cy\,(act)btb\ X\ AVybtb}{\sum_{x=1}^{s} Cxbp + \sum_{y=1}^{t} Cy\,btb} x100$$

Where

Cxbp(act)	=	Total actual operated capacity of x^{th} HVDC pole
Cxbp	=	Total rated capacity of x^{th} HVDC pole
AVxbp	=	Availability of x^{th} HVDC pole
Cybtb(act)	=	Total actual operated capacity of y^{th} HVDC back-to-back station block
Cybtb	=	Total rated capacity of y^{th} HVDC back-to-back station block
AVybtb	=	Availability of y^{th} HVDC back-to-back station block
s	=	Total no of HVDC poles
t	=	Total no of HVDC Back to Back blocks

4. The availability for each category of transmission elements shall be calculated based on the weightage factor, total hours under consideration and non-available hours for each element of that category. The formulae for calculation of the Availability of each category of the transmission elements are as per **Appendix-V**. The weightage factor for each category of transmission elements shall be considered as under:

    (a) For each circuit of the AC line – The number of sub-conductors in the line multiplied by ckt-km;

    (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 stations connecting two Regional grids- Rated MW capacity of each block; and

    (g) For STATCOM – Total rated MVAR Capacity.

5. The transmission elements under outage due to the following reasons shall be deemed to be available:

    i. Shut down availed for maintenance of another transmission scheme or construction of new element or renovation/upgradation/additional capitalization in an existing system approved by the Commission. If the other transmission scheme belongs to the transmission licensee, the Member Secretary, RPC may restrict the deemed availability period to that considered reasonable by him for the work involved. In case of a dispute regarding deemed availability, the matter may be referred to the Chairperson, CEA, within 30 days.

    ii. Switching off of a transmission line to restrict over-voltage and manual tripping of switched reactors as per the directions of the concerned RLDC.

    iii. Shut down of a transmission line due to the Project(s) of NHAI, Railways and Border Road Organization, including for shifting or modification of such transmission line or any other infrastructure project approved by Ministry of Power. Member Secretary, RPC may restrict the deemed availability period to that considered reasonable by him for the work

involved; Provided that apart from the deemed availability, any other costs involved in the process of such shutdown of transmission line shall not be borne by the DICs.

Provided that such deemed availability shall be considered only for the period for which DICs are not affected by the shutdown of such transmission line.

6. For the following contingencies, the outage period of transmission elements, as certified by the Member Secretary, RPC, shall be excluded from the total time of the element under the period of consideration for the following contingencies:

   i) Outage of elements due to force majeure events beyond the control of the transmission licensee. However, whether the same outage is due to force majeure (not design failure) will be verified by the Member Secretary, RPC. A reasonable restoration time for the element shall be considered by the Member Secretary, RPC, 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. Member Secretary, RPC 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 a substation or bays owned by another agency causing an 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 RLDC 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 RLDC's direction for restoration;

   iii) The outage period which can be excluded for the purpose of sub-clause (i) and (ii) of this clause shall be declared as under:

      a. Maximum up to one month by the Member Secretary, RPC;

      b. Beyond one month and up to three months after the decision at RPC;

      c. Beyond three months by the Commission for which the transmission

license shall approach the Commission along with reasons and steps taken to mitigate the outage and restoration timeline.

7. Time frame for certification of transmission system availability: (1) The following schedule shall be followed for certification of availability by the Member Secretary of the concerned RPC:

- Submission of outage data along with documentary proof (if any) and TAFPn calculation by Transmission Licensees to RLDC/ constituents

  – By the 5th of the following month;

- Review of the outage data by RLDC / constituents and forward the same to respective RPC – by 20th of the month;

- Issue of availability certificate by respective RPC – by the 3rd of the next month.

Appendix-V

FORMULAE FOR CALCULATION OF AVAILABILITY OF EACH CATEGORY OF TRANSMISSION ELEMENTS

For AC transmission system

AVo(Availability of o no. of AC lines) = $\frac{\sum_{i=1}^{o} Wi(Ti - TNAi)/Ti}{\sum_{i=1}^{o} Wi}$

AVq(Availability of q no. of ICTs) = $\frac{\sum_{k=1}^{q} Wk(Tk - TNAk)/Tk}{\sum_{k=1}^{q} Wk}$

AVr(Availability of r no. of SVCs) = $\frac{\sum_{l=1}^{r=1} Wl(Tl - TNAl)/Tl}{\sum_{l=1}^{r} Wl}$

AVp(Availability of p no. of Switched Bus reactors) = $\frac{\sum_{m=1}^{p} Wm(Tm - TNAm)/Tm}{\sum_{m=1}^{p} Wm}$

AVu(Availability of u no. of STATCOMs) = $\frac{\sum_{n=1}^{u} Wn(Tn - TNAn)/Tn}{\sum_{n=1}^{u} Wn}$

AV_{xbp}(Availability of an individual HVDC pole) = $\frac{(Tx - TN)}{Tx}$

AV_{ybtb} (Availability of an individual HVDC

Back-to-back Blocks) = $\frac{(Ty - TNAy)}{Ty}$

For the HVDC transmission system

For the new HVDC commissioned but not completed twelve months;

For first 12 months: [(AV_{xbp} or AV_{ybtb})x95%/85%], subject to a ceiling of 95%.

Where,

o	=	Total number of AC lines;
AVo	=	Availability of o number of AC lines;
p	=	Total number of bus reactors/switchable line reactors;
AVp	=	Availability of p number of bus reactors/switchable line reactors;
q	=	Total number of ICTs;
AVq	=	Availability of q number of ICTs;
r	=	Total number of SVCs;
AVr	=	Availability of r number of SVCs;.
U	=	Total number of STATCOM;
AVu	=	Availability of u number of STATCOMs;
W*i*	=	Weightage factor for *i*th transmission line;
W*k*	=	Weightage factor for *k*th ICT;
W*l*	=	Weightage factors for inductive & capacitive operation of *l*th SVC;
Wm	=	Weightage factor for mth bus reactor;
Wn	=	Weightage factor for nth STATCOM.

T*i*, , T*k*, T*l*, , T*m*, T*n*, *Tx*, *Ty*	The total hours of ith AC line, kth ICT, lth SVC, *m*th Switched Bus Reactor & nth STATCOM, xth HVDC pole, yth HVDC back-to-back blocks during the period under consideration (excluding time period for outages not attributed to transmission licensee for the reasons given in Para 5 of the procedure)
$T_{NA}i$, $T_{NA}k$ $T_{NA}l$, $T_{NA}m$, $T_{NA}n$, $T_{NA}x$, $T_{NA}y$	The non-availability hours (excluding the time period for outages not attributable to transmission licensee taken as deemed availability as per Para 5 of the procedure) for ith AC line, *k*th ICT, lth SVC , *m*th Switched Bus Reactor, nth STATCOM, xth HVDC pole and ythHVDC back-to-back block.