

HIMACHAL PRADESH ELECTRICITY REGULATORY COMMISSION, SHIMLA

NOTIFICATION Shimla, the 2nd March, 2023

No. HPERC/H(1)/39.- The Commission, in exercise of the powers conferred by sub-section (1) of Section 181 and Clauses (za) and (zb) of Sub-section (2) of Section 181, read with Sections 30, 57, 58, 59 and Clause (i) of Sub-section (1) of Section 86 of the Electricity Act, 2003 (36 of 2003), Rule 3 of the Electricity (Procedure for Previous Publication) Rules, 2005 and all other powers enabling it in this behalf, and after previous publication, hereby makes the following Regulations, namely :-

REGULATIONS

Chapter-I General

1. **Short title and commencement.-** (1) These Regulations may be called the Himachal Pradesh Electricity Regulatory Commission (Transmission Performance Standards) Regulations, 2023.
(2) These Regulations shall be applicable to all the licensees engaged in the Transmission of electricity in the State of Himachal Pradesh.
(3) These Regulations shall come into force from the date of their publication in the Rajpatra, Himachal Pradesh.
2. **Definitions.-** (1) In these Regulations, unless the context otherwise requires-
 - (a) **“Act”** means the Electricity Act, 2003 (36 of 2003), including amendments thereto;
 - (b) **“Affected Person”** means an user of Intra-state Transmission System, who is affected due to non-adherence to the Standards of Performance specified in these Regulations by the Transmission Licensee;
 - (c) **“Availability”** means time in hours, the transmission system is capable to transmit electricity at its rated voltage from the supply point to the delivery point and shall be expressed in percentage (%) of total hours in a given period;
 - (d) **“Delivery Point or Interconnection point”** means the physical touch point where the electric power is supplied / received by the user to/from the State transmission system;
 - (e) **“Extra High Voltage (EHV)” or “Extra High Tension (EHT)”** means the voltage, which exceeds 33,000 volts; under normal conditions subject, however, to the percentage variation allowed under electricity rules;

- (f) **“Force Majeure Event”** means, with respect to any party, any event or circumstance, which is not within the reasonable control of, or due to an act or omission of, that party and which, by the exercise of reasonable care and diligence, that party is not able to prevent, including, without limiting the generality of the foregoing:
- (i) Acts of God, including but not limited to lightning, storm, earthquakes, flood, drought and natural disaster;
 - (ii) strikes, lockouts, go-slow, bandh or other industrial disturbances;
 - (iii) acts of public enemy, wars (declared or undeclared), blockades, insurrections, riots, revolution, sabotage, vandalism and civil disturbance;
 - (iv) unavoidable accident, including but not limited to fire, explosion, radioactive contamination and toxic chemical contamination;
 - (v) any shutdown or interruption of the grid, which is required or directed by the State or Central Government or by the Commission or the State Load Despatch Centre;
- (g) **“Grid Code”** means the State Grid Code specified by the Commission under clause (h) of Sub-section (1) of Section 86 of the Act;
- (h) **“Intra-state Transmission System (IaSTS)”** means State Transmission System which includes the entire transmission network within the State excluding the Inter-state Transmission System;
- (i) **“State Transmission Utility (STU)”** means the Board or the Government Company specified as such by the State Government under Sub-section (1) of Section 39 of the Act;
- (j) **“System Average Interruption Duration Index (SAIDI)”** means the average duration of sustained interruptions at time occurring during the reporting period for a voltage class, determined by dividing the number of EHV sub-stations in service during the reporting period having that class of voltage supply;
- (k) **“System Average Interruption Frequency Index (SAIFI)”** means the average frequency of sustained interruptions at time occurring during the reporting period for a voltage class, determined by dividing the number of EHV sub-stations in service during the reporting period having that class of voltage supply;
- (l) **“State Transmission System”** means the system of EHV network and electrical equipments operated and/or maintained by the Transmission Licensee for the purpose of the transmission of electricity among generating stations, external interconnections, distribution systems and any other user connected to it;
- (m) **“Transmission Licensee”** means a licensee authorized under section 14 of the Act to establish or operate transmission lines. At present "Himachal

Pradesh Power Transmission Corporation Limited (HPPTCL)" is transmission licensee in the State;

- (n) **“User”** means any person who uses any segment/ element of the Intra-state Transmission System including Generating Station located in the State, Independent Power Producer(s), Renewable Energy Power Plant, Distribution Licensee, Deemed Licensee, Open Access Customer interconnected to State Transmission System and entered into Transmission Service Agreement with Transmission Licensee; and
- (o) **“Year”** means financial year.
- (2) The words and expressions used in these Regulations and not defined herein, but defined in the Act / Rules or any other Regulations of the Commission, shall have the meaning assigned to them under the Act / Rules or any other Regulations of the Commission.

Chapter-II

Objective, Norms and Methodology

3. **Objective.-** (1) These standards of performance shall serve as guidelines for Transmission Licensee to operate its State Transmission System for providing an efficient, reliable, coordinated and economical system of electricity supply and transmission.
- (2) These standards set the levels of operational security and quality of supply, which a licensee shall be obliged to maintain in making power available for the purposes of supply / receipt to/from user. The objectives of the performance standards are-
- i. to ensure that the Grid Performance meets a minimum standard, which is essential for the User’s system demand and the equipment function properly;
 - ii. to enable the Users to design their systems and equipment to suit the electrical environment that they operate in;
 - iii. to ensure compliance of Standards of Performance by Transmission Licensees; and
 - iv. to monitor operational performance of Transmission Licensees.
4. **Performance Standards.-** All Transmission Licensees shall comply with the following Standards of performance specified in these Regulations:
- (I) Transmission System Availability
 - (II) Reliability Indices
 - (III) Restoration Time

Provided that standards of performance as specified in these Regulations shall be minimum standards that Transmission Licensee shall

achieve and maintain:

Provided further that any time limits set out in these Regulations shall refer to maximum time permitted for performing activities to which they relate to:

Provided further that Transmission Licensee shall also comply with “Standards for Operation and Maintenance of Transmission Lines” as specified in Central Electricity Authority (Grid Standards) Regulations, 2010 as amended from time to time.

(I) Transmission System Availability-

The Transmission System Availability of a transmission element/ system for a given period is the time during which transmission system is capable of transmitting electricity at its rated voltage to the delivery point. The norms of Availability of Transmission System for recovery of Annual Transmission Charges and Incentive shall be as specified in Transmission Service Agreement or Himachal Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2011, as amended from time to time.

(II) Reliability Indices-

(a) System Average Interruption Frequency Index (SAIFI)-

System Average Interruption Frequency Index (SAIFI) $SAIFI = \Sigma I / N$

Where,

ΣI = Sum number of interruptions exceeding 5 minutes at a time duration in the month for the voltage class.

N = Number of EHV sub-stations in service at the beginning of month having that class of voltage supply.

(b) System Average Interruption Duration Index (SAIDI) -

$SAIDI = \Sigma D / N$

Where,

ΣD = Sum of duration all interruptions of exceeding 5 minutes at a time in the month for the voltage class.

N = Number of EHV sub stations in service at the beginning of month having that class of voltage supply :

Provided that all interruptions of duration exceeding 5 (five) minutes at a time shall be considered for computation of indices:

Provided further that interruptions due to scheduled outage (including three shift operation of agriculture pump sets),

load shedding to meet capacity shortage, failure of Inter-state Transmission System or failure of generating units (leading to grid failure or system islanding) shall be excluded.

- (c) SAIFI and SAIDI for the transmission system shall be calculated on monthly basis for each voltage class as per item (a) and (b) above and the same shall not be exceeded to the values as given in the Table-1 below:

Table-1

| SAIFI | SAIDI |
|---------------------------|----------------------|
| 2 interruptions per month | 30 minutes per month |

- (d) The detail of SAIFI and SAIDI shall be submitted to the Commission as per Regulation 7 of these Regulations.

(III) Restoration Time-

Restoration time for different types of failures of transmission line, power transformers and reactors shall be as per the following Table :-

Table-2

| Sl. No. | Type of Failures | Restoration Time from the date of occurrence of failure (Days) | |
|---------|--|--|-----------------------------------|
| 1. | Insulator failure | | |
| | Plain Terrain | 1 | |
| | Hilly Terrain | 2 | |
| | Tribal Areas | Summer Months (April to October) | Winter Months (November to March) |
| | | 3 | 4 |
| 2. | Tower after collapse by Emergency Restoration System (ERS) | 12 | |
| 3. | Tower after collapse | | |
| | Plain Terrain | 30 | |
| | River Bed | 50 | |
| | Tribal Areas | Summer Months (April to October) | Winter Months (November to March) |
| | | 90 | 130 |
| | | 60 | |
| 4. | Phase conductor broken | | |
| | Plain Terrain | 2 | |
| | Hilly Terrain | 3 | |
| | Tribal Areas | Summer Months (April to October) | Winter Months (November to March) |
| | | 3 | 7 |
| 5. | Failure of earth wire | | |

| | | | |
|----|---|-------------------------------------|--------------------------------------|
| | Plain Terrain | 2 | |
| | Hilly Terrain | 3 | |
| | Tribal Areas | Summer Months (April to October) | Winter Months (November to March) |
| | | 4 | 6 |
| 6. | Restoration of Failure of Power Transformer/Inter Connecting Transformer (Single/three Phase) | 120 | |
| 7. | Restoration of the failed reactor | 120 | |

Note: 1. Hilly Terrain and Tribal Areas shall be as per notification issued by Central / State government from time to time.

2. In the event of different types of failure of transmission line, transformers and reactors, the power supply of the affected area(s) has to be restored on top priority.

5. **Payment of Compensation.-** Any failure by the Transmission Licensee to maintain the standards of performance for restoration time of various elements as specified in Table-2 of clause (III) of Regulation 4 shall render the concerned licensee liable for payment of compensation as per Regulation 6 of these Regulations to an affected person claiming such compensation:

Provided that any failure by the Transmission Licensee to maintain the standards of performance as provided in Clause (I) and Clause (II) of Regulation 4, the penalties for such failure shall be imposed as provided in the Himachal Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2011 as amended from time to time:

Provided further that the payment of compensation by the Transmission Licensee shall be without prejudice to any penalty, which may be imposed or any prosecution which may be initiated by the Commission in accordance with the provisions of the Act.

6. **Methodology for Compensation.-** (1) An affected person, within ninety (90) days from the date of restoration of transmission element for the standards as specified in Table-2 of clause (III) of Regulation 4, may make an appropriate Petition to the Commission for award of compensation along with necessary documentary evidence of being affected because of non-adherence of Standards of Performance.

(2) The Commission shall determine the compensation after giving reasonable opportunity to the concerned transmission licensee of being heard:

Provided that the compensation to be paid by the

Transmission Licensee to the affected party shall be 1.5 times of the applicable transmission charges for the affected person during such period of non-adherence of Standards of Performance or as awarded by the Commission through its order.

Chapter-III **Information to be furnished by Transmission Licensees**

7. **Information to be furnished by Transmission Licensees.-** (1) All Transmission Licensees, shall furnish the following to the Commission-

- (i) the level of performance achieved regarding element wise system availability, total availability of transmission system, SAIFI and SAIDI, provided in clause (I) and Clause (II) of Regulation 4 of these Regulations, alongwith its business plans to be submitted in accordance with Regulation 37 of Himachal Pradesh Electricity Regulatory Commission (Terms and Conditions for Determination of Transmission Tariff) Regulations, 2011, as amended from time to time;
- (ii) month wise details of element where restoration time has exceeded the standards as specified in Clause (III) of Regulation 4 ;
- (iii) month wise details of compensation paid by the Transmission Licensee under Regulation 5 of these Regulations; and
- (iv) any other information as required by the Commission.

(2)The month wise information provided in Sub-regulation (1) of this Regulation shall be submitted to the Commission in the requisite formats twice during the year, on six monthly basis, i.e. by 31st October and 30th April for the periods April to September and October to March respectively:

Provided that such information also be displayed by the Commission on its website.

(3)All Transmission Licensees shall display on their websites the actual performance against the specified Standards of Performance on a monthly basis and the aggregate amount of compensation paid, if any, in the formats enclosed in the Schedule.

8. **Annual Review of Performance Standards.-** The Commission, by an Order, may designate a Nodel Agency or a Committee to review the performance of each Transmission Licensee every year and submit its recommendations, if any, to the Commission.

9. **Force Majeure.-** The Commission may, if it considers necessary or expedient to do so and for the reasons to be recorded in writing, relax adherence to any specific Standard of Performance during Force Majeure

event:

Provided that the Transmission Licensee shall not be discharged from its liability on account of its failure to maintain the Standards of Performance under these Regulations, if such failure is attributed to the negligence or deficiency or lack of preventive maintenance of the State transmission system or failure to take reasonable precaution which has resulted in loss to the affected person.

Chapter-IV Miscellaneous

10. **Power to remove difficulties.**- If any difficulty arises in giving effect to any of the provisions of these Regulations, the Commission may, either suo-motu or on an application made to it, by general or special order, make such provisions, not inconsistent with the provisions of the Act or provisions of other Regulations as specified by the Commission, as may appear to be necessary for removing the difficulty in giving effect to the objectives of these Regulations.
11. **Power to amend Schedule.** - The Commission, may, at any time, by an order, published in the Official Gazette add, vary, alter, modify or amend any of the provisions of the Schedule to these Regulations.
12. **Power to Relax.**- The Commission may, by general or special order, for reasons to be recorded in writing, and after giving an opportunity of being heard to the parties likely to be affected by grant of relaxation, may relax any of the provisions of these Regulations on its own motion or on an application made before it by an interested person.
13. **Overriding effect.**- The provisions of these Regulations shall have overriding effect notwithstanding anything inconsistent therewith contained in any other Regulations of the Commission, for the time being in force or in any instrument/detailed procedure having effect by virtue of any such Regulations.

By Orders of the Commission,

-sd

Secretary

SCHEDULE-A

Information to be furnished by Transmission Licensee to the Commission

- (I) Outage Details of AC Transmission Line/ Power Transformers/ Static VAr Compensator/ Series Compensator/ Line Reactors/ Bus Reactors for the month of.....

Month wise Element wise Transmission System Availability

See Regulation 4(I)

| Element Name | Outage | Restoration | Reason of Outage | Duration of Outage Attributable to | | | | % Availability |
|--------------|-----------|-------------|------------------|------------------------------------|---------|--------------------------|------------------|----------------|
| | Date Time | Date Time | | Transmission Licensee | Others | Force Majeure Conditions | Deemed Available | |
| | | | | Hrs:Min | Hrs:Min | Hrs:Min | Hrs:Min | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

- (II) **Yearly Availability of the AC Transmission System**

| Name of Element | Year | % Availability |
|-----------------|------|----------------|
| | | |
| | | |

(III) SAIFI and SAIDI of the Transmission System

See Regulation 4(II)

| Month | SAIFI (in Numbers) | SAIDI (in mins) |
|--------------|---------------------------|------------------------|
| | | |

(IV) The restoration times for different types of failures of a transmission line and failure of power transformer and reactor in the following format:

See Regulation 4(III)

| Sl. No. | Types of failures | Restoration time | | Actual restoration time (in days) |
|----------------|--|-------------------------|---------------------------------|--|
| | | Table Ref. No. | Specified time (in days) | |
| 1. | Insulator failure | | | |
| 2. | Tower after collapse by Emergency Restoration System (ERS) | | | |
| 3. | Tower after collapse without emergency Restoration System | | | |
| 4. | Snapping of Phase conductor | | | |
| 5. | Failure of earth wire | | | |
| 6. | Failure of Power Transformer/Inter Connecting Transformer | | | |
| | Restoration of failed Power Transformer/Inter Connecting Transformer (Single/three Phase Unit) | | | |
| 7. | Failure of Reactors (Single/three Phase Unit) | | | |
| | Restoration of the failed reactor | | | |

(V) Details of Elements where restoration time has exceeded the standards specified in Regulation 4(III).

| Element Name | Restoration time as specified in Regulation 4(III) (in days) | Actual restoration time (in days) |
|---------------------|---|--|
| | | |
| | | |
| | | |

(VI) Details of compensation paid by the transmission licensee under Regulation 5.

| Element Name | Violation of Regulation 4(I) and 4(II) | | Violation of Regulation 4(III) | | Compensation Paid (in Rs.) |
|--------------|--|-----------------------|--|-----------------------------------|----------------------------|
| | % Availability Prescribed | Actual % Availability | Restoration time as per Regulation (in days) | Actual restoration time (in days) | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| Total | | | | | |