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CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

No.L-1/67/2012-CERC

Dated: 17<sup>th</sup> September, 2012

## NOTIFICATION

In exercise of the powers conferred under sub-section (1) of Section 57 read with clause (p) of sub-section (2) of Section 178 of the Electricity Act, 2003 (36 of 2003), and all other powers enabling it in this behalf, and after previous publication, the Central Electricity Regulatory Commission hereby makes the following Regulations:

### CHAPTER-1

#### PRELIMINARY

#### 1. Short title and Commencement

(1) These regulations may be called the Central Electricity Regulatory Commission

(Standards of Performance of inter-State transmission licensees) Regulations, 2012.

- (2) These regulations shall come into force from the date of their publication in the Official Gazette.
2. **Scope:** These regulations shall be applicable to all the inter-State transmission licensees.

3. **Definitions**

- (1) In these Regulations, unless the context otherwise requires:-

- (a) **‘Act’** means the Electricity Act, 2003 (36 of 2003) as amended from time to time;
- (b) **‘Affected Person’** means a user of the inter-State transmission system who is affected due to non-adherence to the Standards of Performance specified in these regulations by the inter-State transmission licensee;
- (c) **‘Commission’** means the Central Electricity Regulatory Commission referred to in sub-section (1) of Section 76 of the Act;
- (d) **‘Inter-State Transmission System (ISTS)’** shall have the same meaning as defined in Section 2 (36) of the Act;
- (e) **‘Inter-State Transmission Licensee’** means a licensee including a deemed inter-State transmission licensee authorized to establish, operate and maintain transmission lines of the inter-State Transmission System;
- (f) **‘User’** means a user of any segment/ element of the inter-State Transmission System and shall include all generators, State Transmission Utilities, State Electricity Boards (SEBs) or load serving entities directly connected to the inter-State Transmission System including Bulk Consumers and any other entity/ person;

- (g) **'Year'** means a financial year.
- (2) Words and expressions used in these regulations and not defined herein but defined in the Act or any of the regulations made by the Commission, shall have the meanings as assigned to them respectively in the Act, and regulations made by the Commission from time to time.

## **CHAPTER-2**

### **OBJECTIVE, NORMS AND METHODOLOGY**

- 4. **Objective:** The objectives of these regulations are to ensure compliance of the Standards of Performance by the inter-State transmission licensees and to provide for an efficient, reliable, coordinated and economical system of electricity transmission, non-adherence of which would entitle the affected parties to compensation.
- 5. **Standards of Performance**
  - (1) All inter-State transmission licensees shall comply with the Standards of Performance specified in these regulations:
    - (a) **Transmission System Availability**
      - (i) The transmission system availability shall be calculated element-wise on monthly basis, in the same manner as provided for in the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009, as amended from time to time and any subsequent enactment thereof.
      - (ii) The deemed availability of the transmission elements under outage shall be as specified in the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009, as amended from time to time and any subsequent enactment thereof.
      - (iii) The element-wise monthly availability of the transmission system

shall not be below the availability as given below:

Sl. No.	Transmission Elements	Availability (% of time)
(i)	AC Transmission line	90
(ii)	ICTs	90
(iii)	Reactors	90
(iv)	Static VAR Compensator	90
(v)	Series Compensator	90
(vi)	HVDC (Back-to-back Stations and bi-pole links)	85

Notes:

- (1) Tower collapse shall not be counted for the purpose of calculation of monthly availability of AC transmission line and HVDC bipole line.
  - (2) Failure of Inter-Connecting Transformer (ICT) and Reactor shall not be counted for the purpose of calculation of availability of Inter-Connectivity Transformer and Reactor.
  - (iv) The element-wise monthly availability shall be certified by the Member Secretary of the Regional Power Committee.
- (b) **Restoration time:** Restoration time for different types of failures of transmission line and Inter-Connecting Transformer (ICT) and reactors shall not exceed the following time limit:

Sl. No.	Types of failures	Restoration Time (Days)
1.	Insulator failure	
	Plain Terrain	1
	Hilly Terrain	2
2.	Tower after collapse by Emergency Restoration System (ERS)	12
3.	Tower after collapse	
	Plain Terrain	30
	River Bed	50
	Hilly Terrain	50



4.	Snapping of phase conductor	
	Plain Terrain	2
	Hilly Terrain	3
5.	Failure of earth wire	
	Plain Terrain	2
	Hilly Terrain	3
6.	Failure of Inter Connecting Transformers (ICTs)	
	Restoration of the failed ICT	120
7.	Failure of Reactors	
	Restoration of the failed reactor	120

6. Any failure by the inter-State transmission licensee to maintain the standards of performance specified in these regulations shall render the said licensee liable to payment of compensation to an affected person claiming such compensation under the provisions of the Act:

Provided also that the payment of compensation by the Inter-State transmission licensee shall be without prejudice to any penalty, which may be imposed or any prosecution which may be initiated by the Commission as provided in the Act.

7. **Methodology for compensation:** An affected person who has suffered a loss on account of non-adherence to the Standard of Performance by any inter-State transmission licensee may make an appropriate application to the Commission for award of compensation:

Provided that the Commission shall determine the compensation after giving reasonable opportunity to the transmission licensees of being heard:

Provided further that the compensation to be paid by the inter-State transmission licensee to the affected party shall be limited to the transmission charges of the particular element to the extent to which it has affected the supply of electricity to the affected person:

Provided further that the inter-State transmission licensee shall not be entitled to recover the amount of compensation awarded through tariff from the users of the transmission electricity:

Provided also that no claim for compensation shall be entertained if the application

for the claim is filed after expiry of a period of ninety days from the end of the month when the availability of the transmission system falls short of the availability specified in Clause 5 (a) and ninety days from the date of restoration of transmission element, as the case may be, for the standards prescribed in Clause (b) of Regulation 5 of these regulations.

### **CHAPTER-3**

#### **INFORMATION TO BE FURNISHED BY THE INTER-STATE TRANSMISSION LICENSEES**

8. **Information to be furnished by the inter-State Transmission Licensees**
  - (1) All inter-State transmission licensees, in accordance with Section 59 of the Act, shall furnish to the Commission, (a) the level of performance achieved, and (b) the number of cases in which compensation was paid, and (c) the aggregate amount of the compensation, in the formats in the Schedule of these regulations.
  - (2) Such information in the requisite formats shall be submitted to the Commission twice during the financial year, on six monthly basis by 31<sup>st</sup> October and 30<sup>th</sup> April for the periods April to September and October to March respectively.
  - (3) All inter-State transmission licensees shall display on their web-sites 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.

### **CHAPTER 4**

#### **MISCELLANEOUS**

9. **Power to Relax:** 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 conditions such as war, mutiny, civil commotion, riot, flood, cyclone, storm, lightning, earthquake, grid failure, and strike/curfew, lockout, fire affecting the inter-State Transmission Licensee's installations and

operation activities, or under such other specific circumstances:

Provided that the Inter-State 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 can be attributed to the negligence or deficiency or lack of preventive maintenance of the inter-state transmission system or failure to take reasonable precaution which has resulted in loss to the affected person.

10. **Power to remove difficulties:** If any difficulty arises in giving effect to any of 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.

**Sd/-**  
**(RAJIV BANSAL)**  
**Secretary**

**NOTE:** The Central Electricity Regulatory Commission (Standards of Performance of inter-State transmission licensees) Regulations, 2012 were published in Part III, Section 4, No. 204 of the Gazette of India (Extraordinary) dated 21.09.2012.

**SCHEDULE**

**I. AC Transmission Line/ ICT/ Static VAR Compensator/ Series Compensator/ HVDC (Back-to-Back Stations and Bi-Pole Links)/ Line Reactors/ Bus Reactors Outage Details for the month of \_\_\_\_\_**

Element Name	Outage		Restoration	Duration of Outage Attributable to				Reason of Outage	% Availability
	Date Time	Date Time		Inter-State Transmission Licensee	Others	System constraint/ Natural calamity/ Militancy	Deemed Available		
				Hrs:Min	Hrs:Min	Hrs:Min	Hrs:Min		



## II. Elements where restoration time has exceeded the standards specified in Regulation 5 (b)

Element Name	Restoration time as specified in Regulation 5 (b) (in days)	Actual restoration time (in days)

## III. Details of compensation paid by the inter-State transmission licensee

Element Name	Violation of Regulation 5 (a)		Violation of Regulation 5 (b)		Compensation paid (in ₹)
	% Availability prescribed	Actual % Availability	Restoration time prescribed (in days)	Actual restoration time (in days)	
<b>Total</b>					

## IV. Data to be furnished by the inter-State Transmission Licensees to POSOCO

$$D = \frac{N_c}{(N_c + N_f)}$$

- (1) The Dependability Index defined as  
 where  $N_c$  is the number of correct operations during the given time interval  
 and  
 $N_f$  is the number of failures to operate at internal power system faults.

- (2) The Security Index defined as  $S = \frac{N_c}{(N_c + N_u)}$   
 where  $N_u$  is the number of unwanted operations.

- (3) The Reliability Index defined  $R = \frac{N_c}{(N_c + N_i)}$   
 where  $N_i$  is the number of incorrect operations and is the sum of  $N_f$  and  $N_u$ .

- (4) From above  $\frac{1}{S} + \frac{1}{D} = \frac{1}{R} + 1$

- (5) The number of trippings of each transmission element. Five or more trippings

of a transmission element in a month to be put on the website by the inter-State Transmission Licensees and reported to the Commission by POSOCO.

**Note:**

1. The data for these indices are presently prescribed for collection by the System Operator.
2. These indices shall be computed by the POSOCO and furnished to the Commission on monthly basis.

**V. Data to be compiled by the inter-State Transmission Licensees**

The restoration times for different types of failures of a transmission line and failure of Inter-Connecting Transformer (ICT) and reactor in the following format:

Sl. No.	Types of failures	Restoration Time (Days)		
		Plain	River bed	Hilly
<b>A.</b>	<b>Elements of the Transmission line for Single Circuit (S/C), Double Circuit (D/C) and Multi-Circuit (M/C) towers for each kV class separately</b>			
<b>1.</b>	<b>Insulator failure</b>			
	(i) Insulator failure in single phase			
	(ii) Insulator failure in two phases			
	(iii) Insulator failure in three phases			
<b>2.</b>	Tower after collapse by Emergency Restoration System (ERS) for S/C, D/C and M/C separately			
<b>3.</b>	Tower after collapse without Emergency Restoration System (ERS) for S/C, D/C and M/C separately			
<b>4.</b>	<b>Tower damage (not collapse)</b>			
	One arm damage			
	Two arms damage			
<b>5.</b>	<b>Snapping of phase conductor</b>			
	Conductor snapping in single phase			
	Conductor snapping in two phases			
	Conductor snapping in three phases			

<b>6.</b>	<b>Failure of earth wire</b>			
<b>7.</b>	<b>Insulator failure with conductor snapping</b>			
<b>8.</b>	<b>Any other combination of failures</b>			
<b>B.</b>	<b>Elements of the sub-station for each kV class separately</b>			
<b>1.</b>	<b>Failure of Inter Connecting Transformers (ICTs)</b>			
	Restoration of the failed ICT			
	<b>Other major failures in ICTs</b>		<b>Single phase unit</b>	<b>Three phase unit</b>
	(i)	Replacement of faulty bushings		
	(ii)	Replacement of failed/ blasted bushings		
	(iii)	Replacement of faulty tap changers		
<b>2.</b>	<b>Failure of Reactors</b>			
	Restoration of the failed reactor			