JOINT ELECTRICITY REGULATORY COMMISSION
(FOR THE UT OF J&K AND THE UT OF LADAKH)
To be published in Extra-Ordinary Part III, Section 4
DRAFT NOTIFICATION
Jammu, the_____2023

No. JERC-JKL/Reg/2023/…… In exercise of the powers conferred on it 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) and all other powers enabling it in this behalf, the Joint Electricity Regulatory Commission for the UT of Jammu & Kashmir and the UT of Ladakh hereby makes the following Regulations:

Chapter 1: General

1. Short Title, Commencement, and Extent

i. These Regulations shall be called the Joint Electricity Regulatory Commission for the UT of Jammu & Kashmir and the UT of Ladakh (Transmission Performance Standards) Regulations, 2023.

ii. These Regulations shall be applicable to all the licensees engaged in the transmission of electricity in the UT of Jammu & Kashmir and the UT of Ladakh.

iii. These Regulations shall come into force from the date of their publication in the Official Gazette.

2. Definitions

2.1 In these Regulations, unless the context otherwise requires:

1. **"Act"** means the Electricity Act, 2003 (36 of 2003), including amendments thereto;
2. **"Affected Person"** means a user of an Intra-State Transmission System, who is affected due to non-adherence to the Standards of Performance specified in these Regulations by the Transmission Licensee;
3. **"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;
4. **"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;
5. **"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;
6. **"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, storms, earthquakes, floods, drought, and natural disasters;

   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;

7. **"State Grid Code"** means the State Grid Code specified by the Commission under clause (h) of Sub-section (1) of Section 86 of the Act;
8. **"Intra-state Transmission System (ISTS)"** means State Transmission System which includes the entire transmission network within the State excluding the Inter-State Transmission System;
9. **"Remote areas"** means the far-flung areas of the UT of J&K and the UT of Ladakh including snowfall areas.
10. **"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;
11. **"System Average Interruption Duration Index (SAIDI)"** means the average duration of sustained interruptions at a 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;
12. **"System Average Interruption Frequency Index (SAIFI)"** means the average frequency of sustained interruptions at a 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;

13. **"State Transmission System"** means the system of EHV network and electrical equipment 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 users connected to it;
14. **"Transmission Licensee"** means a licensee authorized under section 14 of the Act to establish or operate transmission lines. At present " Jammu & Kashmir Power Transmission Corporation Limited (JKTCL)" is the transmission licensee in the State;
15. **"User"** means any person who uses any segment/ element of the Intra-State Transmission System including Generating Station located in the State/UT, 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
16. **"Year"** means financial year

2.2 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 2: Objective, Norms, and Methodology

3. Objective- (1) These standards of performance shall serve as guidelines for the Transmission Licensee to operate its 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 the 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 with Standards of Performance by Transmission Licensees; and
- **iv.** to monitor the operational performance of the Transmission Licensees.

4. Performance Standards- All Transmission Licensees shall comply with the following Standards of performance specified in these Regulations:

- **i.** Voltage Variation
- **ii.** Frequency Variation
- **iii.** Safety Standards
- **iv.** Transmission System Availability
- **v.** Reliability Indices
- **vi.** 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 in these Regulations shall refer to the 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 the Central Electricity Authority (Grid Standards) Regulations, 2010 as amended from time to time;

i. Voltage Variation:

- **a.** Voltage Variation is defined as the deviation of the root-mean-square (RMS) value of the voltage from its nominal value, expressed in terms of percent. Voltage Variation may be either of short duration not exceeding one minute or long duration for a time greater than one minute.
- **b.** For the purpose of these standards, the sustained variation in steady-state voltage exceeding one-minute duration shall be considered. The specified permissible limits of sustained voltage variation shall not apply in the cases where the circumstances are reasonably beyond the control of the State Transmission Utility /Transmission Licensee e.g. major break-downs, grid failures, accidents, system distress conditions, etc.
- **c.** State Transmission Utility /Transmission Licensee shall make all possible efforts to ensure that the grid voltages remain within the following voltage levels at all EHT sub-stations of its Transmission System:

Voltage (kV rms)					
Nominal Voltage (kV)	**Maximum**		**Minimum**		**Reference**
	Limit (%)	**Value (%)**	**Limit (%)**	**Value (%)**	
765	+5	800	-5	728	State Grid Code
400	+5	420	-5	380	State Grid Code
220	+10	245	-10	198	State Grid Code
132	+10	145	-7	122	State Grid Code
33	+10	35	-9	30	State Grid Code

d. The compliance with above standards is subjected to the following conditions:
- Voltage is maintained by PGCIL, at Transmission Licensee/ State Transmission Utility interfaces, as per limits.
- Discoms drawal at a power factor not below 0.95 lagging.
- Loading of all lines limited to the Surge Impedance Loading
- (SIL) in normal conditions.

e. The compliance shall be reported as per Annexure- 1A to 1E.

ii. Frequency Variation:

a. State Transmission System shall always operate as an integral part of the Northern grid. However, frequency management is the joint responsibility of all constituents of the Northern grid. State Transmission Utility /Transmission Licensee shall be responsible for complying with the provisions of the IEGC/State Grid Code. Further State Transmission Utility /Transmission Licensee shall fulfill its responsibility to keep the frequency within the following specified ranges:

Target Range (As per State Grid Code)	**Variation (%)**	**Value (Hz)**
Upper Limit	+0.1%	50.05 Hz
Lower Limit	-0.2%	49.90 Hz

b. The compliance shall be as per Annexure-2.

iii. Safety Standards

a. State Transmission Utility /Transmission Licensee shall observe the general safety requirements as laid down in the Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010, and its amendments for construction, installation, protection, operation, and maintenance of the electric supply lines and apparatus.

b. State Transmission Utility /Transmission Licensee shall designate suitable persons as designated officers as specified in the State Grid Code for coordination of safety procedures before work is taken up, during work, and after work is completed till the concerned system component is energized, both inside its own Transmission System and across a control boundary between State Transmission Utility's/Transmission licensee's Transmission System and that of any user.

c. State Transmission Utility / Transmission Licensee shall develop its own Operation and Maintenance Manual (including Safety Regulations) taking into consideration the safety requirements for the construction, operation, and maintenance of electrical plants and electric lines as may be specified by the Central Electricity Authority under Clause (c) of section 73 of the Act.

d. A consolidated report on the compliance of each clause of section 6.2(c) of this regulation shall be submitted to the Commission in the proforma enclosed in Annexure — 3.

iv. Transmission System Availability

The availability of the AC Transmission system shall be calculated as per the applicable (**Terms & Conditions for the Determination of Tariff), Regulations,** and its amendment.

The AC and HVDC System Availability shall not be below 98.0%.

The compliance shall be reported as per Annexure- 4 (a), (b), (c).

v. Reliability Indices

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

System Average Interruption Frequency Index (SAIFI) SAIFI = Σ I / N

Where,

Σ I = 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 = Σ D/ N
Where,
Σ D = Sum of the duration of all interruptions of exceeding 5 minutes at a time in the month for the voltage class.
N = Number of EHV substations in service at the beginning of the month having that class of voltage supply:
Provided that all interruptions of a duration exceeding 5 (five) minutes at a time shall be considered for computation of indices:
Provided further that interruptions due to scheduled outages, 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 a monthly basis for each voltage class as per items (a) and (b) above and the same shall not be exceeded to the values as given in 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.

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

Table-2

Sl No.	**Type of Failure**	**Restoration Time from the date of occurrence of failure (Days)**	
1.	**Insulator failure**		
	Other than remote areas	**1**	
	Remote Areas	Summer Months **(April to October)**	Winter Months **(November to March)**
		3	**4**
2.	Tower after collapse by Emergency Restoration System (ERS)	**7**	
3.	Tower after collapse		
	Other than remote areas	**30**	
	Remote Areas	Summer Months **(April to October)**	**Winter Months (November to March)**
		90	**120**
4.	Phase conductor broken		
	Other than remote areas	**2**	
	Remote Areas	Summer Months (April to October)	Winter Months **(November to March)**
		3	**7**
5.	Failure of earth wire		
	Other than remote areas	**1**	
	Remote Areas	Summer Months **(April to October)**	Winter Months **(November to March)**
		3	**5**
6.	Restoration of Failure of Power	**If Transformer is**	**7**

	Transformer/Inter Connecting Transformer (Single/three Phase)	**available**	
		If Transformer is not available	**180**
7.	Restoration of the failed reactor	**If the reactor is available**	**7**
		If the reactor is not available	**180**

Note:

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

5. Payment of Compensation and Penalty- 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 (vi) 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 Regulation 4, except Clause (vi), the penalties for such failure shall be determined by the Commission:

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:

Provided further that the Transmission Licensee shall not be entitled to recover the amount of compensation/penalty through tariff from the users.

6. Methodology for Compensation-

i. 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 (vi) of Regulation 4, may make an appropriate Petition to the Commission for the award of compensation along with necessary documentary evidence of being affected because of non-adherence of Standards of Performance.

ii. 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 information to the Commission for every financial year - the level of performance achieved with regard to the standard of performance, as indicated in clause (i) to Clause (vi) of Regulation 4 of these Regulations, as per the formats given in Annexure 1-7;

(2) The report shall be submitted within 60 days from the end of the financial year.

(3) The Commission may, from time to time, modify the contents of the formats and add new formats as per the requirement. The same shall be communicated to the transmission licensee for reporting.

(4) 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 Annexure-7.

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

8. Annual Review of Performance Standards - The Commission, by an Order, may designate a Nodal 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 the 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 a 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 -** The Commission, may, at any time, add, vary, alter, modify, or amend any of the provisions of 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 the 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 for the period specified in the order.

By Order of the Commission.

V.K.Dhar,(JKAS)
Secretary, JERC
J&K and Ladakh

Annexure —1A

Voltage Variation Performance Achieved During the Year (FY…...) Voltage— 765 KV Bus at EHV Substations

Standard Limits - Maximum +5% or 800 KV & Minimum -5% or 728 KV

Sl. No.	Name Of Substation	Max. Voltage Actually Achieved		Min. Voltage Actually Achieved	
		%	KV	%	KV
1.					
N					

Annexure - 1B

Voltage Variation Performance Achieved During the Year (FY…….) Voltage—400KV Bus at EHV Substations

Standard Limits - Maximum +5% or 420KV_ & Minimum -5% or 380KV

Sl. No.	Name Of Substation	Max. Voltage Actually Achieved		Min. Voltage Actually Achieved	
		%	KV	%	KV
1.					
N					

Annexure —1C

Voltage Variation Performance Achieved During the Year (FY……) Voltage —220KV Bus at EHV Substations

Standard Limits - Maximum +10% or 245KV & Minimum -10% or 198KV

Sl. No.	Name Of Substation	Max. Voltage Actually Achieved		Min. Voltage Actually Achieved	
		%	KV	%	KV
1.					
2.					
N					

Annexure — 1D

Voltage Variation Performance Achieved During the Year (FY…….)Voltage—132KV Bus At EHV Substations

Standard Limits - Maximum +10% or 145 KV & Minimum -7% or 122 KV

Sl. No.	Name Of Substation	Max. Voltage Actually Achieved		Min. Voltage Actually Achieved	
		%	KV	%	KV
1.					
2.					

Annexure - 1E

Voltage Variation Performance Achieved During the Year (FY……)Voltage—33 KV Bus At EHV Substations

Standard Limits - Maximum +10% or 36 KV & Minimum -9% or 30 KV

Sl. No.	Name Of Substation	Max. Voltage Actually Achieved		Min. Voltage Actually Achieved	
		%	KV	%	KV
1.					
2.					

Annexure - 2

Frequency Variation Performance Achieved During the Year (FY……..) Standard Frequency — 50 Htz

Target Range : Maximum +0.1% or 50.05 Htz and Minimum -0.2% 49.90 Htz

SI. No.	Frequency Range	Duration in % age of Time
1	Above 50.3 Htz	
2	From 50.05 to 50.3 Htz	
3	From 50 to 50.05 Htz	
4	From 49.90 to 50 Htz	
5	From 49.50 to 49.90 Htz	
6	From 49.2 to 49.50 Htz	
7	Below 49.2 Htz	

Annexure - 3

Confirmation Report On Security Standards For the Year (FY……..)

Sl. No.	With Regard to	Whether Compiled	Reason for Deviation, if any
1	General Safety Requirements		
2	Supports Standards and Safety Clearances		
3	Line Crossing and Guarding		
4	Earthing		
5	Safety and Protective Devices		
6	Protection Against Lightening		
7	Unused Overhead Lines		

Annexure—4 (a)

System Availability Achieved During the Year (FY…….) at the Different Voltage Levels

Standard Limits: 98.0%

System Voltage	Actual Achieved				
	Q1	Q2	Q3	Q4	Year

765 kV					
400 kV					
220 kV					
132 kV					
Over All (AC System)					
HVDC Transmission system					

Annexure—4 (b)

For each quarter:

Element	**Total outage time during the quarter (minutes)**	**Total outage time during the quarter considered for computation of Availability (minutes)**	**% Availability During the Quarter**
AC Transmission line			
Power Transformer/ Interconnecting Transformer (ICT)			
Reactors			
Static VAR Compensator			
Series Compensator			
HVDC (Back-to-back Stations and bi-pole links)			

Annexure — 4 (c)

System availability of five major Critical Lines

SR NO.	**DESCRIPTION**	**UNIT (%)**	**TARGET FOR THE QUARTER**	**ACTUAL FOR THE QUARTER**	**CUMULATIVE TARGET TILL THE END OF THE CURRENT QUARTER**	**CUMULATIVE ACHIEVED TILL END OF CURRENT QUARTER**	**% VARIATION IN CUMULATIVE ACHIEVEMENT w.r.t. CUMULATIVE TARGET**	**CUMULATIVE ACHIEVEMENT FOR THE SAME PERIOD LAST YEAR**	**% VARIATION IN CUMULATIVE COMPARED TO THE SAME PERIOD OF LAST YEAR**

Annexure — 5

SAIFI and SAIDI of the Transmission System

Months	**SAIFI (in Numbers)**	**SAIDI (in mins)**
April		
May		
March		

Annexure — 6

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

Details of Elements where restoration time has exceeded the standards specified in Regulation 4

Sl No.	Types of failures	Name of element	Restoration time as per regulations		Actual restoration time (in days)
			Non-remote areas	Remote areas	
1.	Insulator failure	i) ii)			
2.	Tower after collapse without emergency Restoration System	i) ii)			
3.	Failure of earth wire	i) ii)			
4.	Restoration of failed Power Transformer/Inter Connecting Transformer (Single/three Phase Unit)	i) ii)			
5.	Failure of Reactors (Single/three Phase Unit)	i) ii)			
6.	Restoration of the failed reactor	i) ii)			

Annexure — 7

Details of compensation paid by the transmission licensee under Regulations 5&6.

Element Name	Violation of Regulation 4(vi)		Compensation Paid (in Rs.)
	Restoration time as per Regulation (in days)	Actual restoration time (in days)	