

# ANDHRA PRADESH ELECTRICITY REGULATORY COMMISSION

## Regulation No. 7 of 2004

### LICENSEES' STANDARDS OF PERFORMANCE

#### **Introduction :**

In order to improve reliability and quality of supply, the Commission notified "Standards of Performance" to be adhered to by the Licensees in September 2000 (Regulation No.6 of 2000). The Commission reviewed these standards and also decided to prescribe the compensation payable to consumers for non-compliance of the Standards in terms of the provisions of Section 57 of the Electricity Act, 2003. Accordingly, the Commission formulated a draft Regulation and published it in A.P.Gazette calling for suggestions from public and interested parties. The Licensees were also given opportunity to represent their views before the Commission. The Commission has suitably modified the provisions, wherever considered necessary, after considering all the view-points presented by the various stakeholders including general public and the Licensees.

In exercise of the powers conferred under Section 181 (za) and (zb) read with Sections 57 and 59 of the Electricity Act, 2003 and all other powers enabling it in that behalf, the Andhra Pradesh Electricity Regulatory Commission hereby makes the following Regulation regarding the Licensees' Standards of performance, namely:-

#### **1. Short title, commencement and interpretation**

- (1) This Regulation may be called the Andhra Pradesh Electricity Regulatory Commission (Licensees' Standards of Performance) Regulation, 2004.
- (2) This Regulation shall be applicable to all Licensees engaged in distribution of electricity in the State of Andhra Pradesh.
- (3) This Regulation extends to the whole of the State of Andhra Pradesh.
- (4) This Regulation shall come into force on the date of its publication in the Andhra Pradesh Gazette.

#### **2. Definitions**

- (1) In this Regulation, unless the context otherwise requires:-
  - (a) "Act" means the Electricity Act, 2003;
  - (b) "area of supply" means the area within which a Licensee is authorised by his Licence to supply electricity;
  - (c) "Commission" means the Andhra Pradesh Electricity Regulatory Commission;
  - (d) "Cities and Towns" mean the areas covered by all Municipal Corporations and other Municipalities including the areas falling under the various Urban Development Authorities;
  - (e) "Rural areas" mean the areas covered by Gram Panchayats, including major and minor Panchayats;
  - (f) "Extra High Tension/Extra High Voltage" means the voltage exceeding 33000 volts under normal conditions;
  - (g) "High Tension/High Voltage" means the voltage exceeding 440 volts but not exceeding 33000 volts under normal conditions;
  - (h) "Licensee" means the Distribution Licensee;
  - (i) "Low Tension/Low Voltage" means the voltage that does not exceed 230/440 volts under normal conditions;

(2) Words and expressions used and not defined in this Regulation shall bear the same meaning as in the Act or in absence of any definition in the Act, the meaning as commonly understood in the electricity supply industry.

### **3. Guaranteed and Overall standards of performance**

(1) The Standards specified in the Schedule - I shall be the Guaranteed Standards of Performance, being the minimum standards of service that a Licensee shall achieve, and the Standards specified in the Schedule-III shall be the Overall Standards of Performance which the Licensee shall seek to achieve in the discharge of his obligations as a Licensee.

(2) The Commission may from time to time add, alter, vary, modify or amend the contents of the Schedule - I, Schedule - II and Schedule-III.

### **4. Compensation**

(1) The Licensee shall be liable to pay to the affected consumers compensation specified in Schedule – II for Licensee’s failure to meet the Guaranteed Standards of Performance specified in Schedule – I. The compensation shall be paid by the Licensee in the manner specified in Schedule II :

Provided that in case of events affecting more than one consumer, the provisions for payment of compensation specified in Schedule-II shall be applicable after the expiry of one year from the date of publication of this Regulation when the data on consumer indexing is expected to be available.

Provided further that the liability for payment of compensation shall be applicable to towns and cities three months after the date on which this Regulation is notified in the Andhra Pradesh Gazette. For rural areas, the effective date for liability for payment of compensation shall be one year after the date of publication of the Regulation in Official Gazette.

(2) The Licensee concerned shall pay the compensation referred to under sub-clause (1) above by way of adjustment in the current or future electricity bill(s) as laid out in Schedule-II.

### **5. Information on Standards of Performance**

(1) For Guaranteed Standards, each Licensee shall furnish to the Commission, in a report for every month and in a consolidated annual report, the following information:

- (a) The levels of performance achieved by the Licensee with reference to the standards specified in Schedule – I to this Regulation;
- (b) The number of cases in which compensation was paid under clause 4 above, and the aggregate amount of the compensation payable and paid by the Licensee, and
- (c) The measures taken by the Licensee to improve performance in the areas covered by Guaranteed Standards and Licensee’s assessment of the targets to be imposed for the ensuing year.

(2) For Overall Standards, each Licensee shall furnish to the Commission, in a report for every quarter and in a consolidated annual report, the following information:

- (a) The level of performance achieved with reference to the standards specified in Schedule – I to this Regulation; and,
- (b) The measures taken by the Licensee to improve performance in the areas covered by Overall Standards and Licensee’s assessment of the targets to be imposed for the ensuing year.

(3) The Commission shall, at such intervals as it may deem fit and not inconsistent with the provisions of the Act, arrange for the publication of the information furnished by Licensees under this Regulation.

### **6. Exemption**

(1) The standards of performance specified in this Regulation shall remain suspended during Force Majeure conditions such as war, mutiny, civil commotion, riot, flood, cyclone, lightning, earthquake or other force and strike, lockout, fire affecting the Licensee’s installations and activities.

(2) Non-compliance of a standard contained in this Regulation shall not be treated as a violation, and the Distribution Licensee shall not be required to pay any compensation to affected consumer(s), if such violation is caused due to grid failure, a fault on the Transmission Licensee's network or on account of instructions given by SLDC, over which the Distribution Licensee has no reasonable control.

(3) The Commission may by a general or special order after hearing the Licensee and the affected consumer(s) / consumer groups, absolve the Licensee from the liability to compensate the consumers for any default in the performance of any standard if the Commission is satisfied that such default is for reasons other than those attributable to the Licensee and further that the Licensee has otherwise made efforts to fulfill his obligations.

## **7. Issue of orders and practice directions**

(1) Subject to the provisions of the Electricity Act, 2003 and this Regulation, the Commission may, from time to time, issue orders and practice directions in regard to the implementation of the Regulation and procedure to be followed and various matters, which the Commission has been empowered by this Regulation to specify or direct.

(2) In particular, the Commission may authorize the Commission staff or any independent agency to conduct periodical checks, monitor the compliance of the Standards by the Licensees and report to the Commission.

**8. Power to remove difficulties:**-If any difficulty arises in giving effect to any of the provisions of this Regulation, the Commission may, by general or special order, do or undertake or direct the Licensees to do or undertake things, which in the opinion of the Commission are necessary or expedient for the purpose of removing the difficulties.

## **9. Power to Amend**

(1) The Commission may at any time, vary, alter, modify, or amend any provisions of the Regulation.

(2) In particular the Commission may review these standards after a period of three years or at any other time, if considered necessary. This Regulation shall however continue to be in force till it is modified based on such review.

## **10. Repeal and Savings**

(1) The Andhra Pradesh Electricity Regulatory Commission (Standards of Performance) Regulation, 2000, shall stand repealed from the date of publication of this Regulation.

(2) Notwithstanding such repeal, anything done or any action taken or purported to have been done or taken including any order direction or notice made or issued under the repealed Regulation shall remain valid.

(3) Nothing in this Regulation shall affect the rights and privileges of the consumers under any other law including the Consumer Protection Act, 1986.

(BY ORDER OF THE COMMISSION)

**S.SURYA  
PRAKASA  
RAO  
Secretary**

## **SCHEDULE – I**

### **GUARANTEED STANDARDS OF PERFORMANCE**

#### **I. Restoration of Power Supply**

1.1 **Normal Fuse-off:** The Licensee shall restore power supply in the case of normal fuse-off calls (replacing Horn Gap (HG) fuses or Low Tension (LT) fuses at the distribution transformer or at the consumer premises) within 4 working hours of receiving the complaint in towns and cities and within 12 working hours of receiving the complaint in rural areas. Individual fuse-off calls at consumer premises, wherever the fault is of such nature that it requires shutting down

the power supply affecting other consumers also, shall not however be attended to between 6PM and 8AM except in case of essential services covered under the Essential Services Maintenance Act (ESMA).

1.2 **Overhead Line/Cable Breakdowns:** In case of overhead line/cable breakdowns, the Licensee shall ensure restoration of power supply within 6 hours of occurrence of breakdown in towns and cities and within 24 hours of occurrence of breakdown in rural areas.

1.3 **Underground Cable Breakdowns:** In case of breakdown of underground cable, the Licensee shall ensure restoration of power supply within 12 hours of occurrence of breakdown in towns and cities and within 48 hours of occurrence of breakdown in rural areas.

1.4 **Distribution Transformer failure:** The Licensee shall restore supply in the case of distribution transformer failures by replacement of transformer within 24 hours of receiving the complaint in towns and cities and within 48 hours of receiving the complaint in rural areas.

1.5 **Period of scheduled outages:** Interruption in power supply due to scheduled outages, other than the load-shedding, shall be notified by the Licensee at least 24 hours in advance and shall not exceed 12 hours in a day. In each such event, the Licensee shall ensure that the supply is restored by not later than 6:00 PM.

## II. Quality of Power Supply

### 2.1 Voltage fluctuations

(i) The Licensee shall maintain the voltages at the point of commencement of supply to a consumer within the limits stipulated hereunder, with reference to declared voltage:

- (a) In the case of Low Voltage, +6% and -6%;
- (b) In the case of High Voltage, +6% and -9%; and,
- (c) In the case of Extra High Voltage, +10% and -12.5%.

(ii) On receipt of a voltage fluctuation complaint, the Licensee shall verify if the voltage fluctuation is exceeding the limits specified in sub-paragraph (i) above and if confirmed, the Licensee shall

- (a) Ensure that the voltages are brought within the said limits, within 10 days of original complaint if no expansion/enhancement of network is involved;
- (b) Resolve the complaint within 120 days, if up-gradation of distribution system is required :

Provided that where a substation is required to be erected to resolve such complaints, the Licensee shall, within one month of the receipt of such complaint, submit to the Commission a proposal for erection of the substation, together with the time required to complete erection and commissioning of such substation and get the same approved by the Commission :

Provided further that where such substation is covered in the Licensee's investment plan approved by the Commission, the Licensee shall complete the erection and commissioning of the such substation within the time period specified in such investment plan :

Provided further that no compensation on account of voltage fluctuations shall be payable to industrial and agricultural consumers who do not provide capacitors to the prescribed extent.

### 2.2 Harmonics

(i) The Licensee shall maintain the limits of harmonics as per the stages prescribed hereunder:

**Stage-1:** The cumulative Total Voltage Harmonic Distortion ( $THD_v$ ) at the Point of Commencement of Supply for each consumer connected at 132KV and above shall be limited to 3% (as per Grid Code of Andhra Pradesh).

**Stage-2:** The cumulative Total Voltage Harmonic Distortion ( $THD_v$ ) at the Point of Commencement of Supply for each consumer connected at 33KV shall be limited to 8% (as per Grid Code of Andhra Pradesh).

**Stage-3:** The cumulative Total Voltage Harmonic Distortion ( $THD_v$ ) at the Point of Commencement of Supply for each consumer connected at 11KV shall be limited to 8% (as per Grid Code of Andhra Pradesh).

- (ii) Stage-1 shall be effective on the expiry of one year from the date of publication of this Regulation. The Commission will notify the compensation amounts for default on this standard on commencement of Stage-I.
- (iii) The Commission will specify the effective dates for Stage-2 and Stage-3 after consultation with the Licensees.
- (iv) The assessment method for recording harmonic levels shall be as laid out in the Grid Code of Andhra Pradesh, until the Commission lays down a separate procedure.

### III. Complaints about meters

3.1 The licensee shall inspect and check the correctness of the meter within 7 working days of receiving the complaint in cities and towns and within 15 working days in rural areas. If the meter is not working (stuck up, running slow, fast or creeping), the licensee shall replace the meter at Licensee's own cost, within 15 days thereafter.

3.2 The Licensee shall replace at Licensee's own cost the burnt out meters within 7 days of complaint if the burning of meter is due to causes attributable to the Licensee like high voltage, loose contacts, aging of meter, etc. If the meter is burnt due to causes attributable to the consumer such as tampering, defect in consumer's installation, meter getting wet, connecting unauthorized additional load by the consumer, etc., the Licensee shall serve a notice to the consumer for recovery of cost of the meter within 7 days of detection and shall replace the meter within 7 days of receiving the payment from the consumer and after necessary corrective action is taken to avoid future damage to the meter.

### IV. Applications for New connections/Additional Load

#### 4.1 Cases where power supply can be provided from existing network

(i) The Licensee shall release supply to an applicant within 30 days of receipt of a complete application accompanied by prescribed fees, charges and security:

Provided that in case of applications requiring supply under Low Tension Agricultural category, such obligation on the part of the Licensee shall be limited to the number of connections that can be covered within the target fixed for the year for release of agricultural connections. The Licensee shall maintain a waiting list of such applicants in a serial order based on the receipt of applications and the waiting list number shall be communicated to the concerned applicant in writing within 15 days of receipt of application. If, however, the applicant's case cannot be covered in the programme of release of agricultural connections fixed for the year, it shall be so indicated in the said written communication.

(ii) The Licensee shall keep the fees, charges and security payable by the applicants for new connections notified and also specify the same on the application form.

#### 4.2 Cases where power supply requires extension of distribution mains

(i) The Licensee shall acknowledge the receipt of the application within 2 days and shall intimate to the applicant in writing, the amount of security and other charges payable within 7, 15, 30 and 45 days of receipt of application for Low Tension, High Tension (11KV), High Tension (33KV) and Extra High Tension (above 33KV) respectively.

(ii) The supply of electricity in such cases shall be effected by the Licensee within the time limits specified hereunder:

<b>Voltage of supply</b>	<b>Period from date of payment of required security and other charges, within which supply of electricity should be provided</b>
Low Tension	30 days
High Tension – 11000 Volts	60 days
High Tension – 33000 Volts	90 days
Extra High Tension – Above 33000 Volts	180 days

Provided that the distribution Licensee may approach the Commission for extension of time specified above, in specific cases where the magnitude of extension of distribution mains is such that it requires more time, duly furnishing the details in support of such claim for extension. Such request should be made immediately after preparation of the estimate for such extension.

#### 4.3 **Erection of substation to extend supply**

In cases of application for new connection, where extension of supply requires erection and commissioning of new 33/11KV substation, the distribution Licensee shall submit to the Commission within 15 days of receipt of such application, a proposal for erection of such 33/11KV substation together with the time required for erecting and commissioning the substation, and get the same approved by the Commission. The Licensee shall commence power supply to the applicant within the time period so approved by the Commission :

Provided that if the substation is meant to extend supply to an individual consumer, the Licensee shall commence erection of the substation only after receipt of necessary security from the applicant :

Provided further that where such substation is covered in the investment plan approved by the Commission, the distribution Licensee shall not be required to take any further approval from the Commission and shall complete erection of such substation within the time period specified in such investment plan.

- 4.4 The Licensee shall not, however, be held responsible for the delay, if any, in extending supply, if the same is on account of problems relating to statutory clearances, right of way, acquisition of land, or the delay in consumer's obligation to obtain approval of Chief Electrical Inspector to Government for his High Tension or Extra High Tension installation, etc. over which Licensee has no reasonable control.

#### **V Transfer of ownership and conversion of services**

5. The Licensee shall give effect to transfer of ownership, change of category and conversion of the existing services from Low Tension to High Tension and vice-versa within the following time limits:

- |   |     |  |  |
|---|-----|--|--|
| } | (a) | Title transfer of ownership  | - within 7 days of receipt of application, with necessary documents and prescribed fee, if any |
|   | (b) | Change of category   |  |
|   | (c) | Conversion from Low Tension single phase to Low Tension 3-phase and vice-versa | - within 30 days from the date of payment of necessary charges by the consumer                 |
|   | (d) | Conversion from Low Tension - to High Tension and vice-versa                   | within 60 days from the date of payment of necessary charges by the consumer                   |

Provided that in case of conversion from Low Tension to High Tension and vice-versa, the Licensee shall not be held responsible for the delay if the same is on account of delay in consumer's obligation to obtain approval of Chief Electrical Inspector to Government, for such installation.

#### **VI. Complaints about consumer's bills**

6.1 (i) The Licensee shall acknowledge the consumer's complaint immediately, if received in person and within 2 working days, if received by post. The Licensee shall resolve the complaint regarding electricity bills within 24 working hours of its receipt, if no additional information is required to be collected and within 7 working days of receipt of complaint in case any additional information is required.

(ii) In case the complaint is genuine and revision of bill already issued becomes necessary, the due date for payment of bill shall be reckoned from the date of revised bill for the purpose of disconnection of supply or for levy of additional charges for belated payment.

## 6.2 Reconnection of supply following disconnection due to non-payment of bills

The Licensee shall restore power supply to a consumer, whose supply has been disconnected due to non-payment of electricity bills, within 4 working hours of receipt of production of proof of payment by the consumer in towns and cities, and within 12 working hours of production of proof of payment by the consumer in rural areas.

### SCHEDULE –II

#### GUARANTEED STANDARDS OF PERFORMANCE AND COMPENSATION TO CONSUMERS IN CASE OF DEFAULT

Service Area	Standard	Compensation payable in case of violation of Standard	
		Compensation payable to individual consumer if the event affects a single consumer	Compensation payable to individual consumer if the event affects more than one consumer
<b>Normal Fuse-off</b>			
Cities and towns	Within 4 working hours	Rs.50 in each case of default	Rs.25 to each consumer affected
Rural areas	Within 12 working hours		
<b>Overhead Line/cable breakdowns</b>			
Cities and towns	Within 6 hours	Rs.50 in each case of default	Rs.25 to each consumer affected
Rural areas	Within 24 hours		
<b>Underground cable breakdowns</b>			
Cities and towns	Within 12 hours	Rs.50 in each case of default	Rs.25 to each consumer affected
Rural areas	Within 48 hours		
<b>Distribution Transformer failure</b>			
Cities and towns	Within 24 hours	Rs.100 in each case of default	Rs.50 to each consumer affected
Rural areas	Within 48 hours		
<b>Period of Scheduled Outage</b>			
Maximum duration in a single stretch	Not to exceed 12 hours	Rs.100 in each case of default	Rs.50 to each consumer affected
Restoration of supply	By not later than 6:00 PM		
<b>Voltage fluctuations</b>			
No expansion/enhancement of network involved	Within 10 days	Rs.50 for each day of default	Rs.25 to each consumer affected for each day of default
Up-gradation of distribution system required	Within 120 days	Rs.100 for each day of default	Rs.50 to each consumer affected for each day of default
Erection of Substation	Within the time period as approved by the Commission	Rs.250 for each day of default	Rs.125 to each consumer affected for each day of default
<b>Meter complaints</b>			
Inspection and replacement of slow, fast/creeping, stuck-up meters	Inspection within 7 days in towns and cities and within 15 days in rural areas and replacement within 15 days thereafter.	Rs.50 for each day of default	Not Applicable
Replace burnt meters if cause attributable to Licensee	Within 7 days	Rs.50 for each day of default	Not Applicable
Replace burnt meters if cause attributable to consumer	Within 7 days of receiving payment from consumer		Not Applicable

Service Area	Standard	Compensation payable in case of violation of Standard	
		Compensation payable to individual consumer if the event affects a single consumer	Compensation payable to individual consumer if the event affects more than one consumer
<b>Application of new connection/additional load</b>			
<b>Connection feasible from existing network</b>			
Release of supply	Within 30 days of receipt of application (along-with prescribed charges)	Rs.50 for each day of default	Not Applicable
<b>Network expansion/enhancement required to release supply</b>			

Release of supply - Low Tension	Within 30 days of receipt of prescribed charges	Rs.50 for each day of default	Not Applicable
Release of Supply - High Tension 11KV	Within 60 days of receipt of prescribed charges	Rs.250 for each day of default	
Release of Supply - High Tension 33KV	Within 90 days of receipt of prescribed charges		
Release of Supply - Extra High Tension	Within 180 days of receipt of prescribed charges		
Erection of substation required for release of supply	Within the time period approved by the Commission	Rs.500 for each day of default	
<b>Transfer of ownership and conversion of services</b>			
Title transfer of ownership	Within 7 days along-with necessary documents and prescribed fee, if any	Rs.50 for each day of default	Not Applicable
Change of category	Within 7 days along-with necessary documents and prescribed fee, if any		
Conversion from LT 1-ph to LT 3-ph and vice-versa	Within 30 days of payment of charges by the consumer		
Conversion from LT to HT and vice-versa	Within 60 days of payment of charges by the consumer	Rs.100 for each day of default	
<b>Resolution of complaints on consumer's bill</b>			
If additional information is required	Within 24 working hours of receipt of complaint	Rs.25 for each day of default	Not Applicable
If no additional information is required	Within 7 working days of receipt of complaint		
<b>Reconnection of supply following disconnection due to non-payment of bills</b>			
Cities and Towns	Within 4 working hours of production of proof of payment by consumer	Rs.50 in each case of default	Not Applicable
Rural Areas	Within 12 working hours of production of proof of payment by consumer		

#### **Manner of payment of compensation amount:**

1. The Licensee shall register every complaint of a consumer regarding failure of power supply, quality of power supply, meters and payment of bills etc., at the customer service centers of each section and at section offices where customer service centers are not available and intimate the complaint number to the consumer.
2. The Licensee shall maintain consumer-wise records regarding the Guaranteed standards of performance in order to give a fair treatment to all consumers and avoid any dispute regarding violation of standard.
3. All payments of compensation shall be made by way of adjustment against current and/or future bills for supply of electricity, but not later than 90 days from the date of violation of a Guaranteed Standard.
4. If the Licensee, however, fails to dispense the compensation amount as laid out in paragraph 3 above the aggrieved consumer(s) can approach the Forum for redressal of grievances of consumers to seek such compensation.

### SCHEDULE-III

#### OVERALL STANDARDS OF PERFORMANCE

- 1.1 **Normal fuse-off calls:** The Licensee shall maintain the percentage of fuse-off calls rectified within the time limits prescribed under sub-paragraph 1.1 of Schedule-I to total calls received at a value not less than 99%.
- 1.2 **Line Breakdowns:** In case of line breakdowns, the Licensee shall ensure restoration of power supply within 6 hours of occurrence of breakdown in towns and cities and within 24 hours of occurrence of breakdown in rural areas as prescribed in sub-paragraph 1.2 of Schedule-I. The Licensee shall achieve this standard of performance in at least 95% of the cases.
- 1.3 **Distribution Transformer Failures:** The Licensee shall maintain the percentage of distribution transformers replaced within the time limits prescribed in sub-paragraph 1.3 of Schedule-I to the total distribution transformers failed at a value not less than 95%.



1.4 **Period of scheduled outages:** As specified in sub-paragraph 1.5 of Schedule-I, interruption in power supply due to scheduled outages, other than the load-shedding, has to be notified in advance and shall not exceed 12 hours in a day and in each such event, the Licensee has to ensure that the supply is restored by 6:00PM. The Licensee shall achieve both of these standards of performance in at least 95% of the cases.

1.5 **Street Light faults**

1.5.1 The Licensee shall rectify line faults and restore streetlights within 24 hours of detection or receipt of complaint, whichever is earlier, and shall achieve this standard of performance in at least 90% of the cases.

1.5.2 In case of a fused light or defective unit, the Licensee, wherever responsible for maintenance of street lights, shall replace the light or rectify/replace the unit within 24 hours of detection or receipt of complaint, whichever is earlier, and shall achieve this standards of performance in at least 90% of the cases.

1.6 **Reliability Indices**

(i) The following reliability/outage indices are prescribed by the Institute of Electrical and Electronics Engineers (IEEE) Standard 1366 of 1998. The Licensee shall compute and report the value of these indices from 2002-03 onwards:

- (a) **System Average Interruption Frequency Index (SAIFI):** The Licensee shall calculate the value as per the formula and methodology specified below.
- (b) **System Average Interruption Duration Index (SAIDI):** The Licensee shall calculate the value as per the formula and methodology specified below.
- (c) **Momentary Average Interruption Frequency Index (MAIFI):** The Licensee shall calculate the value as per the formula and methodology specified below.

**Method to compute Distribution System Reliability Indices**

The Indices shall be computed for the Discom as a whole by stacking, for each month all the 11KV/33KV feeders in the supply area, excluding those serving predominantly agricultural loads, and then aggregating the number and duration of all interruptions in that month for each feeder. The Indices would then be computed using the following formulae:

$$\sum_{i=1}^n (A_i * M_i)$$

1. **SAIFI** =  $\frac{\sum_{i=1}^n (A_i * M_i)}{M_t}$  Where,

$A_i$  = Total number of sustained interruptions (each longer than 5 minutes) on  $i^{th}$  feeder for the month

$N_i$  = Connected load of  $i^{th}$  feeder affected due to each interruption

$N_t$  = Total connected load at 11KV in the Distribution Licensee's supply area

$n$  = number of 11KV feeders in the licensed area of supply (excluding those serving predominantly agricultural loads)

$$\sum_{i=1}^n (B_i * M_i)$$

2. **SAIDI** =  $\frac{\sum_{i=1}^n (B_i * M_i)}{M_t}$  Where,

$B_i$  = Total duration of all sustained interruptions on  $i^{th}$  feeder for the month.

$$\sum_{i=1}^n (C_i * M_i)$$

3. **MAIFI** =  $\frac{\sum_{i=1}^n (C_i * M_i)}{M_t}$  Where,

$C_i$  = Total number of momentary interruptions (each less than or equal to 5 minutes) on  $i^{th}$  feeder for the month

Note: The feeders must be segregated into rural and urban and the value of the indices must be reported separately for each month.

- (i) The Licensee shall compute the value of these indices separately for feeders serving predominantly agricultural loads. The methodology for computation of indices shall remain the same as in the case of other feeders.
- (ii) Based on the information provided by the Licensees, the Commission would notify the target levels for these indices annually.

1.7 **Frequency variations:** The Licensee shall achieve coordination with other network constituents such as State Transmission Utility, State Load Dispatch Center, distribution Licensees and other transmission Licensees in an endeavour to maintain the supply frequency as per the Indian Electricity Grid Code (the present values being between 49.0 and 50.5 Hz), as amended from time to time. The Licensee shall conduct hourly measurement of supply frequency and report the number of events when the supply frequency was outside prescribed limits.

1.8 **Voltage Unbalance:** The Licensee shall ensure that the voltage unbalance does not exceed 3% at the point of commencement of supply. Voltage Unbalance shall be computed in a manner to be specified by the Commission separately or as part of the Distribution Code or Distribution Operating Standards.

1.9 **Billing mistakes:** The Licensee shall maintain the percentage of bills requiring modifications following complaints to the total number of bills issued, at a value not greater than 0.1%.

1.10 **Faulty meters:** The Licensee shall maintain the percentage of defective meters to the total number of meters in service, at a value not greater than 3%.

1.11 **The Summary of Overall performance standards is as follows:**

Service area	Overall Standard of Performance
<b>Normal fuse-off calls</b>	At least 99% calls received should be rectified within prescribed time limits in both Cities and Towns and in Rural areas
<b>Line Breakdowns</b>	At least 95% of cases resolved within time limit in both Cities and Towns and in Rural areas
<b>Distribution Transformer failure</b>	At least 95% of DTRs to be replaced within prescribed time limits in both Cities and Towns and in Rural areas
<b>Period of scheduled outage</b>	
Maximum duration in a single stretch	At least 95% of cases resolved within time limit
Restoration of supply by 6:00 PM	
<b>Street Light Faults</b>	
Rectification of line faults	At least 90% cases should be complied within prescribed time limits
Replacement of fused/defective unit	
<b>Continuity Indices</b>	
SAIFI	To be laid down later by the Commission
SAIDI	
MAIFI	
<b>Frequency variations</b>	To maintain supply frequency within 49 – 50.5Hz as per IEGC.
<b>Voltage Unbalance</b>	Maximum of 3% at point of commencement of supply
<b>% billing mistakes</b>	Not exceeding 0.1%
<b>% faulty meters</b>	Not exceeding 3%

SURYA PRAKASA RAO  
Secretary