

HIMACHAL PRADESH ELECTRICITY REGULATORY COMMISSION

NOTIFICATION

Shimla the 2005

No. HPERC/ 401

The Himachal Pradesh Electricity Regulatory 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 sub-section (1) of section 57, section 58, section 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, in consultation with the licensees and the persons likely to be affected, hereby makes the following regulations namely:-

REGULATIONS

- 1. Short title, extent and commencement-** (1) These regulations shall be called the Himachal Pradesh Electricity Regulatory Commission (Distribution Licensees' Standards of Performance) Regulations, 2005.
- (2) These regulations shall be applicable to all distribution licensees engaged in distribution 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 .-** In these regulations, unless the context otherwise requires,-
 - (1) "Act" means the Electricity Act 2003 (36 of 2003);
 - (2) "area of supply" means the area within which a distribution licensee is authorized by his license to supply electricity;
 - (3) "Commission" means the Himachal Pradesh Electricity Regulatory Commission;
 - (4) "call centre" means the place or office set up by the distribution licensee to register complaints;
 - (5) "control centre" means a centre established for compilation, evaluating, ranking and analyzing the performance of 'responsibility centres' established at the Headquarters of the distribution licensee;
 - (6) "distribution system" means the system of wires and associated facilities between the delivery points on the transmission lines or the generating station connection and the point of connection to the installation of the consumers and shall also include electric line, sub-station and electrical plant that are primarily maintained for the purpose of distributing electricity in the area of supply of such distribution licensee notwithstanding that such line, sub-station or electrical plant are high pressure cables or overhead lines or associated with such high pressure cables or overhead lines; or used incidentally for the purposes of transmitting electricity for others.
 - (7) "distribution licensee", means a licensee authorized to operate and maintain a distribution system for supplying electricity to the consumers in the areas

of supply and includes a person deemed to be a licensee under section 14 of the Act;

- (8) “dispute” means where the distribution licensee or his employees, against whom a complaint has been made, denies or disputes, the allegations contained in the complaint and includes failure of a commercial negotiation between complainant and distribution licensee within the scope of the Act, the codes, the standards and the regulations as framed by the Commission;
- (9) “Electricity Supply Code” means the Electricity Supply Code specified under section 50 of the Act;
- (10) “forum” means Forum for the Redressal of Grievances of the Consumers constituted by the distribution licensee under sub-section (5) of section 42 of the Act;
- (11) “responsibility centre” means a Circle Unit of the distribution licensee headed by an officer not below the rank of the Superintending Engineer;
- (12) “schedule” means the schedule to these regulations; and
- (13) other words and expressions used in these regulations, not defined herein, but defined in the Act shall have the same meaning as are assigned to them in the said Act or in absence of any definition in the Act, the meaning as commonly understood in the electricity supply industry.

3. Objective.- These standards lay down the guidelines to maintain certain critical distribution system parameters within the permissible limits. These standards shall serve as guidelines for distribution licensees to operate their distribution system for providing an efficient, reliable, coordinated and economical system of electricity distribution and retail supply. The objectives of these performance standards are:-

- (a) to ensure that the distribution system performance meets a minimum standard which is essential for the consumers’ installation to function properly;
- (b) to enable the consumers to design their systems and equipment to suit the electrical environment that they operate in;
- (c) to enhance the quality of the distribution system and services to meet acceptable standards in the short term and gradually moving towards improved standards in the long term;
- (d) to lay down standards of performance, to measure consumer centric initiatives undertaken by the distribution licensee in providing services, computerized call centres, mobile vans for fault attendance, comprehensive information database, infusion of technology like pre-paid meters and unmanned sub-stations ; and
- (e) to introduce engineering resource management concept to rationalize staff deployment in construction and operation and management functions and to initiate resource planning functions at the circle level.

4. Legal Provisions.- (1) The Commission, in pursuance of section 57, read with clause (i) of sub-section (1) of section 86 of the Act, shall specify the standards of performance of the distribution licensees, intending to serve as guidelines for them to operate their distribution system for providing quality and reliability of resources;

(2) The Commission, as required under sub-section (1) of section 57 of the Act, shall, after consultation with licensees and persons likely to be affected, specify standards of performance of a licensee or a class of licensees.

(3) If a licensee fails to meet the standards specified under sub-section (1) of section 57 of the Act, without prejudice to any penalty, which may be imposed, or prosecution be initiated, he shall be liable to pay to a person affected such compensation as may be determined under sub section (2) of section 57 by the Commission;

Provided that before determination of compensation, the concerned licensee shall be given reasonable opportunity of being heard.

(4) The Commission may, in exercise of the powers vested in it under section 58, specify different standards under sub-section (1) of section 57 of the Act for a class or classes of the licensees.

(5) Every licensee shall, within the period specified, under sub-section 59 of the Act, by the Commission, furnish to the Commission the following information, namely :-

(a) the level of performance achieved under sub-section (1) of section 57 of the Act;

(b) the number of cases in which compensation was made under sub-section (2) of section 57 of the Act and the aggregate amount of the compensation.

(6) The Commission shall at least once in every year arrange for publication, in such form and manner, as it considers appropriate, of such of information furnished to it under sub-regulation (5).

5. Standards of performance.- (1) Standards specified in Schedule-I shall be the guaranteed standards of performance, being the minimum standards of service which a licensee shall achieve and maintain in discharge of his obligations as a distribution licensee. It aims at maintaining quality, continuity and reliability of services to its consumers at efficient levels specified by the Commission.

(2) The Standards specified in Schedule-II are in terms of financial, technical, engineering resource management and operational efficiency levels to be adopted by the management of the distribution licensee as per the best industry practices and international norms.

(3) The distribution licensee shall, frequently but at an interval not less than six months, educate the consumers of their rights regarding the standards of performance as specified by the Commission under section 57 of the Act, by giving wide publicity amongst its field staff and public in general including local rural and urban bodies through electronic and print media.

6. Compensation.-

(1) If the distribution licensee fails to meet the guaranteed standards of performance as specified in Schedule-I, the distribution licensee shall pay to

the affected person, the compensation mentioned against each of the standards of performance in the said Schedule-I.

- (2) The compensation mentioned against each item in Schedule-I is payable to the affected person without establishing the violation of the standard and loss/damage suffered on account of failure of the distribution licensee to meet the guaranteed standards of performance and is without prejudice to any penalty which may be imposed or prosecution initiated against the distribution licensee by the Commission.
- (3) Notwithstanding the compensation payable under sub-regulation (1), the affected person may initiate proceedings before the Commission for determination of the compensation for violation of the standard and loss/damage suffered consequent of failure of the distribution licensee to meet the guaranteed standards of performance.

Provided that the Commission before awarding the compensation shall give a reasonable opportunity of being heard to the distribution licensee and the affected persons and shall take into account the compensation already paid by the distribution licensee under sub-regulation (i)

- (4) The distribution licensee shall pay-
 - i) the compensation mentioned in sub-regulation(i), within thirty days of the failure of the distribution licensee to meet the guaranteed standards of performance and
 - ii) the compensation determined by the Commission under sub-regulation(3), within ninety days of such determination; either through adjustment against existing, current and/ or future bills for supply of electricity and the distribution license shall duly reflect the said payment/adjustment in the quarterly and the consolidated annual report to be submitted by him under regulation-9.
- (5) The Commission may demand such additional information, evidence and summon records, logged data from the distribution licensee and/or affected persons for determination of compensation. The distribution licensee on demand shall furnish such information and records to the Commission supported through an affidavit.
- (6) The Licensee shall maintain the record of compensation payable under sub-regulation (1) showing the name, consumer number and address of the affected person, amount of compensation payable and actually paid, mode of adjustment of compensation in bill as per sub-regulation (2) in each case. The liability of compensation under sub-regulation (1) shall be applicable from the first day of the month subsequent to the month in which these regulations come into effect.
- (7) Compensation paid by the distribution licensee, which is attributed to negligence, inefficiency and for not exercising reasonable care and diligence by its employees as may be determined by the Commission would not be allowed as pass-through in ARR of the distribution licensee.

7. Channels for redressal of complaints and grievances:-

- (1) The various channels available for a consumer to address his complaints and grievances shall be as under: -

Sl. No.	Channel	Eligibility	Exceptions
1	Forum for Redressal of Grievances of the Consumers	Any consumer- (a) who is aggrieved by non-redressal of his grievance by the distribution licensee; or (b) Who is not satisfied by the redressal of his grievance by the distribution licensee; in accordance with the guidelines specified by the Commission under sub-section(5) of section-42 of the Act i.e. the HPERC (Guidelines for Establishment of Forum for Redressal of Grievances of the Consumers) Regulations, 2003.	(i) SOP complaints involving compensation (ii) Complaints mentioned in regulation 8 of the HPERC (Guidelines for Establishment of Forum for Redressal of Grievances of the Consumers) Regulations, 2003. (iii) Matters subjudice before the Commission, any other Court, Tribunal/ statutory body.
2.	Electricity Ombudsman	(i) Any person aggrieved by an order made by the Forum (ii) Any person whose complaint is not redressed by the Forum within 90 days from the date of lodging of complaint	(i)SOP complaints involving compensation (ii)Matters subjudice before the Commission, any other Court, Tribunal or statutory body.
3.	H .P. Electricity Regulatory Commission	SOP complaints involving compensation	

8. Implementation Arrangements.- Each operation Circle Unit of the distribution licensee shall be treated as a responsibility centre for overall performance of standards specified under these regulations. The officer heading the responsibility centre shall have total accountability and associated responsibility and authority for managing the actions and performance of the responsibility centre. In cases of centralized or specialized functions, the identified responsibility centers alongwith nodal officers have to be furnished by the distribution licensee within 90 days of these regulations coming into force.

(2) The operational head of the distribution licensee shall have overall responsibility for implementation of standards of performance and he shall, to bring in the sense of ownership and competition set the performance parameters as well as benchmarks for improvement for each responsibility centre. The operational head of the distribution licensee shall establish one control centre at the head office under the officer not below the rank of Superintending Engineer for compilation, evaluation, ranking and analyzing the performance of responsibility centre.

(3) Immediately after the commencement of these regulations, and under intimation to the Commission, but not later than 30 days the control centre shall develop uniform formats for data collection, compilation and evaluation of performance of the responsibility centres. The control centre shall prepare and circulate the procedures for compilation and computation of various standards and performance indicators alongwith uniform definitions and explanations of terms used for unambiguous interpretation by all the responsibility centers.

(4) The control centre shall monitor, evaluate, rank the circles and advise the responsibility centres for corrective measures. A monthly report for progressive monthly improvement made by the responsibility centre shall be prepared by the control centre.

Explanation: For the purpose of this sub-regulation the expression “operational head” shall mean and include the officer heading the distribution wing of the licensee.

9. Information on standards of performance.- (1) The distribution licensee shall furnish to the Commission, in a quarterly report and a consolidated annual report for each financial year, the following information as to the guaranteed standards of performance:-

- (a) the levels of performance achieved by the distribution licensee with reference to those specified in Schedule – I to these regulation;
- (b) the number of cases in which compensation was payable and the aggregate amount of the compensation paid and payable by the distribution licensee;
- (c) the number of claims preferred by the consumers against the distribution licensee for failure to meet the guaranteed standards of performance and the action taken by the distribution licensee including the reasons as to the delay in payment, or non-payment of compensation for such claims.

(2) The Commission shall, at such intervals as it may deem fit, arrange for the publication of the information furnished by the licensees under these regulations.

(3) In the consolidated annual report, the distribution licensee shall report on the measures taken by the distribution licensee to improve performance areas, assessment of the targets to be imposed for the ensuing year, indicating responsibility centre-wise achievement of benchmark indicators analyzing the performance of each circle and ranking of circles with respect to each performance indicator set in Schedule –I

(4) The Ombudsman shall prepare a report on half yearly basis giving details of the nature of the grievances of the consumer dealt by the Ombudsman, the response of the Licensee in the redressal of the grievances and the opinion of the Ombudsman on the licensee's compliance of the standards of performance as specified by the Commission under section 57 of the Act during the preceding six months.

(5) Licensee should immediately constitute a working group but not later than 30 days responsible for monitoring the information and co-ordination with the Commission for necessary explanations, if any and intimate to the Commission about the constitution of the working group.

10. (1) Monitoring and Enforcement of Standard of Performance- In order to ensure proper and due enforcement of the Standards of Performance, the Commission shall monitor the compliance thereof and may on being satisfied that distribution Licensee has failed to maintain and discharge his obligations in relation to the Standards of Performance under these regulations or has failed to furnish information in time or has furnished inadequate or incorrect information under sub-regulation 9 (1) by order, in writing, direct the Secretary or officers, not below the rank of the gazetted officer, or Consultant or any other person, specified in the order, to investigate and to report to the Commission.

(2) If the report under sub-regulation(1) or information obtained under regulation 9 or any part thereof is proposed to be relied upon by the Commission in forming its opinion and satisfaction, the distribution Licensee shall be given a reasonable opportunity for filing objections and making submissions on the report or information.

(3) The Commission may direct, that the expenditure incurred in conducting the investigations in sub-regulation (1) be borne by distribution Licensee.

11. Use of Information: The Commission shall have the right to use the information received under regulation 9 or regulation 10 as it deems fit and publishing it or placing it on the Commission's website and/ or directing the licensee to display the information on the licensee's website and also for initiating action under section 19, section 23 and other enabling provisions of the Act.

12.Exemptions: (i) The guaranteed standards of performance specified in these regulations 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 distribution licensee's installations and activities.

(2) The Commission, may by a general or special order issued for the purpose, and after hearing the distribution licensee and such representatives of the affected consumer group as the Commission considers it to be appropriate, release the distribution 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 distribution licensee and that the distribution licensee had otherwise duly made efforts to fulfill his obligations.

13. Issue of orders and directions.- Subject to the provisions of the Act and these regulations, the Commission may, from time to time, issue orders and directions in regard to the implementation of these regulations and procedure to be followed on various matters.

14. 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, do or undertake or direct the distribution licensee to do or undertake things, which in the opinion of the Commission are necessary or expedient for the purpose of removing the difficulties.

15. Power to amend schedules. - The Commission, may by an order at any time add, vary, alter, modify or amend any of the provisions of the schedules attached to these regulations.

16. Repeal and savings, - (1) The Complaint Handling Mechanism and Procedure approved by the Commission under sub-section (d) of section 22 of the Electricity Regulatory Commission's Act, 1998 (Act No. 14 of 1998) and adopted w.e.f. 11.02.2002 by the Himachal Pradesh State Electricity Board, is hereby repealed.

(2) Anything done or any action taken or purported to have been done or taken including any order, direction made or notice or issued by the Commission prior to the commencement of these regulations shall in so far as it is not inconsistent with the provisions of these regulations, be deemed to have been done or taken or issued under the corresponding provisions of these regulations.

(3) As far as the distribution licensee is concerned, notwithstanding any thing contrary contained in the HPERC (Guidelines for Establishment of Forum for Redressal of Grievances of the Consumer) Regulations, 2003 framed by the Commission under Section 181 of Electricity Act 2003, these regulations shall have overriding effect.

(4) Nothing in these regulations shall affect the rights and privileges of the consumers under any other law including the Consumer Protection Act, 1986 (68 of 1986).

By the Order of the Commission

Secretary
Himachal Pradesh Electricity Regulatory Commission

SCHEDULE – I

[see regulations 2(13),5(1),6(1)(3),9(3) and 15]

GUARANTEED STANDARDS OF PERFORMANCE**(1) Call Centre**

Nature of Service / Standards	Maximum time limit for rendering service	Compensation to be Levied
Call Centre		
Establishment of Consumer Call Centres with appropriate Information, Communication and Technology backbone along with appropriate staffing of the same with following coverage area		
Atleast one sub division covered per Circle	Within 6 months	Rs. 100/- per day for Circles not covered beyond 3 months* after ond expiry of the specified time
Atleast one sub division covered per Division	Within 12 months	Rs. 100/- per day for Division not covered beyond 6 months* after expiry of the specified time
All Sub-Divisions	Within 24 months	Rs. 100/- per day for not covered beyond 12 months* after expiry of the specified time
First response against a Consumer Call	2 Minutes	At the end of each month, average response time is to be analyzed and any delay in average response time beyond standard time allowed shall be subject to compensation at Rs. 10/ per minute delay for that Call Centre*.
Registration of Consumer Call	5 Minutes	At the end of each month, average time taken in registration of Consumer Call is to be analyzed and any delay beyond standard time allowed shall be subject to compensation at Rs. 10/ per minute delay for that Call Centre*.
Issue of Docket No.	5 Minutes	At the end of each month, average time taken in issue of Docket to be analyzed and any delay beyond standard time allowed shall be subject to compensation at Rs. 10/ per minute delay for that Call Centre*.

Nature of Service / Standards	Maximum time limit for rendering service	Compensation to be Levied
Intimation to consumer after attending call		After attending the call, Call centre has the responsibility to intimate the consumer about the status of his complaints.

(2) Consumer Related Services

Nature of Service/ Performance Standards	Maximum Time Limit for rendering service	Compensation Leviable	Targeted Level of Standard of Performance
Fuse-off /Fault Calls:			
Cities/Towns a) Complaints received between 9 AM to 9 PM b) Complaints received between 9 AM to 9 PM	6 hours 12 hours	Rs. 5/- per affected consumer for every hour of delay beyond 4 working hours subject to maximum of Rs. 50/- per affected consumer per day.	99% of Fuse-off /Fault complaints received
Rural Areas Complaints received any time during the day	24 hours	Rs. 20/- per affected consumer per day beyond one day subject to maximum of Rs. 50/- per affected consumer.	99% of Fuse-off /Fault complaints received
Line Breakdowns:			
Cities/Towns	(i) Where replacement of pole is not required: 24 Hrs.	Rs. 5/- per affected consumer per day for delay beyond one day subject to maximum of Rs. 50/- per affected consumer.	95% of Line Breakdown complaints received

Nature of Service/ Performance Standards	Maximum Time Limit for rendering service	Compensation Leviable	Targeted Level of Standard of Performance
	ii) Where replacement of pole is required: 48 Hrs.	Rs. 5/- per affected consumer per day for delay beyond two day subject to maximum of Rs. 50/- per affected consumer.	90% of Line Breakdown complaints received
Rural Areas	i) Where replacement of pole is not required: 24 Hrs. ii) Where replacement of pole is required: 72 Hrs.	Rs. 5/- per affected consumer per day for delay beyond one day subject to maximum of Rs. 50/- per affected consumer. Rs. 5/- per affected consumer per day for delay beyond three day subject to maximum of Rs. 50/- per affected consumer.	90% of Line Breakdown complaints received 85% of Line Breakdown complaints received
Replacement of failed Distribution Transformer:			
Cities/Towns	1 day	Rs. 20/- per affected consumer/day for delay beyond 1 day subject to maximum of Rs. 100/- per affected consumer.	95% of number of transformers reported failed
Rural Areas	3 days	Rs. 10/- per affected consumer/day for delay beyond 3 days subject to maximum of Rs. 100/- per affected consumer.	95% of number of transformers reported failed
Replacement of damaged service line/wire:			
Cities/Towns	1 day	Rs. 20/- per day for delay beyond 1 day	99% of damaged service line complains received
Rural Areas	2 days	Rs. 10/- per day for delay beyond 1 day	
Complaints about meters			

Nature of Service/ Performance Standards	Maximum Time Limit for rendering service	Compensation Leviable	Targeted Level of Standard of Performance
LT Consumers			
Testing & Checking for Correctness of Meter			
Urban Area	7 days from lodging of complaint	Rs. 50/- per day for delay beyond 7 days subject to maximum of Rs.200/- per consumer	90% of requests
Rural Area	15 days from lodging of complaint	Rs. 50/- per day for delay beyond 15 days subject to maximum of Rs.200/- per consumer	90% of requests
Defective/Stopped/Burnt Meter/Metering Equipment Replacement¹ -			
Urban Area			
Replacement not attributable to consumer	7 days from the date of receiving information /lodging of the complaint	Rs. 50/- per day for delay beyond specified period subject to maximum of Rs.200/- per consumer	90%
Where the cost is recoverable from the consumer or meter is to be supplied by the licensee.	7 days after the receipt of payment of metering equipment.	Rs. 50/- per day for delay beyond specified period subject to maximum of Rs.200/- per consumer	90%
Rural Area			
Replacement not attributable to consumer	15 days	Rs. 50/- per day for delay beyond specified period subject to maximum of Rs.200/- per consumer	90%

¹ In case of supply being affected due to burnt meters then replacement has to be to be undertaken within 1 day.
Replacement of old electromechanical meters should be done by Electronic Meters or Pre Paid Meters Only.

Nature of Service/ Performance Standards	Maximum Time Limit for rendering service	Compensation Leviable	Targeted Level of Standard of Performance
Where the cost is recoverable from the consumer or meter is to be supplied by the licensee	15 days after the receipt of payment of metering equipment.	Rs. 50/- per day for delay beyond specified period subject to maximum of Rs.200/- per consumer	90%
H.T. Consumers			
Replacement not attributable to consumer	Within 7 days after receipt of complaint provided meter is available with Licensee, otherwise within 1 month in any case	Rs. 200/- per day for delay beyond specified period subject to maximum of Rs.2000/- per consumer	99%
Where the cost is recoverable from the consumer.	Within 7 days after receipt of payment/supply of equipment provided meter is available with Licensee, otherwise within 1 month in any case.	Rs. 200/- per day for delay beyond specified period subject to maximum of Rs.2000/- per consumer	100%
When the consumer is required to supply the metering equipment	7 days after delivery of metering equipment to the Licensee's office	Rs. 200/- per day for delay beyond specified period subject to maximum of Rs.2000/- per consumer	100%
Complaints about consumer's bills			
Urban Area	1 day – 10 Days	Rs. 5/ per consumer per day beyond 10 days delay subject to maximum of Rs. 50/-	99% of complaints received
Rural Area	1day - 15 Days	Rs. 5/ per consumer per day beyond 15 days delay subject to maximum Rs. 50/-	99% of complaints received

Nature of Service/ Performance Standards	Maximum Time Limit for rendering service	Compensation Leviable	Targeted Level of Standard of Performance
Other Standards			
Making and keeping Regular Appointments	a) At Sub-Divisional Level -Twice a week b) At Divisional Level - Once a week c) At Circle Level - Once a fortnight d) At Chief Engineer Level -Once a month Note: 1) Days and time of appointments should be notified by the Board on uniform basis for all offices throughout the State. ii) Days and time of appointment shall be displayed outside the room of the Officer concerned and also printed on the backside of the bills.	20 50 100 200	95%

Nature of Service/ Performance Standards	Maximum Time Limit for rendering service	Compensation Leviable	Targeted Level of Standard of Performance
Making and keeping Special Appointments.	Such appointments may be had at the above levels at the specific request of any consumer.		95%
Investigation of voltage complaints and reply to the consumer.	Within 4 weeks of receipt of complaint.	Rs.100/-	95%

Note: The compensation for items marked * shall be set kept aside by Licensee in a separate account.

(3) Efficiency Parameters

Parameters	Targeted Level of Standard of Performance
Failure of 33/11 kV Power Transformers	Not exceeding 1% in a year of the number of transformers in service at the beginning of year
11/0.4 kV Distribution Power Transformers	Not exceeding 2% in a year of the number of transformers in service at the beginning of year
% of Stopped/Defective Meters	Not exceeding 5 % of the meters installed
% T& D Losses	Subject to Commission's directions in ARR/Tariff Order from time to time
% Collection Efficiency	Annual Average monthly collection efficiency not less than 99% LT Consumers – 95% HT & EHT consumers – 100% Where monthly collection efficiency = Amount realized divided by the amount assessed during the month. Bills challenged in any court of law shall not be considered for the purpose of collection efficiency.

(4) Reliability & Quality of Power Supply

Reliability of the distribution system operated by the Licensee shall be computed on the basis of number and duration of sustained interruptions in a year. In a power system, it may take a few minutes to restore power after transient faults or to reroute power in the network to restore supply to the affected area, where a large number of consumers are involved. Sustained interruptions of more than ten minutes duration shall be considered for judging the reliability of the system and temporary interruptions not exceeding ten minutes duration shall be ignored in computation.

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:

a. SAIDI

SAIDI (System Average Interruption Duration Index) is commonly referred to as customer minutes of interruption and is designed to provide information about the average time the customers are interrupted.

$$SAIDI = \sum_{i=1}^n (B_i \times N_i) / N_t$$

Where,

B_i = Total duration of all sustained interruptions (each longer than 10 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 licensee's supply area (excluding those serving predominantly agricultural load)

b. SAIFI

SAIFI (System Average Interruption Frequency Index – sustained interruptions) is designed to give information about the average frequency of sustained interruptions per customer over a pre defined area.

$$SAIFI = \sum_{i=1}^n (A_i \times N_i) / N_t$$

Where,

A_i = Total number of sustained interruptions (each longer than 10 minutes) on i th feeder for the month

N_i = Connected load of i th feeder affected due to each interruption

Nt = Total connected load at 11kV in the Distribution licensee's supply area

n = Number of 11kV feeders in the licensee's supply area (excluding those serving predominantly agricultural load)

c. Consumers Average Interruption Frequency Index (CAIFI)

Consumers average interruption frequency index, which shall be calculated by dividing the total number of sustained interruptions to consumers in a year by the total number of consumers served. An interruption in supply to a consumer shall be considered as one interruption to one consumer. In case of failure of a line or transformer, number of interruptions shall be equal to the number of consumers affected. The index shall be expressed as number of interruptions per consumer per year and shall be calculated annually.

$$CAIFI = \frac{\Sigma (I * K)}{N}$$

Where

I = Number of interruptions exceeding 10 minutes at a time for the voltage class.

K = Number of Consumers whose power supply remained 'off' as a result of such interruption.

N = Total Number of Consumers in service at the beginning of year having that class of voltage supply

* Multiplication sign

CAIFI shall be calculated for a sub-station, for a circle and for the Licensee as a whole. The index shall be expressed in number of interruptions per consumer per year.

d. Consumers Average Interruption Duration Index (CAIDI)

Consumers average interruption duration index, which shall be calculated by dividing the total minutes of sustained interruption in supply to consumers in a year by the total number of consumers served. The index shall be expressed as number of minutes of interruption per consumer per year and shall be calculated annually.

$$CAIDI = \frac{\Sigma (P * K)}{N}$$

Where

P = Duration of interruptions exceeding 10 minutes at a time for the voltage class.

K = Number of Consumers whose power supply remained 'off' as a result of such interruption's.

N = Total Number of Consumers in service at the beginning of the year having that class of voltage supply

* Multiplication sign

CAIDI shall be calculated for a sub-station, for a circle and for the Licensee as a whole. The index shall be expressed in interruption minutes per consumer per year.

While calculating the SAIFI, SAIDI, CAIFI and CAIDI indices, the following types of interruptions shall not be taken into account:

- (a) Planned outages
- (b) Temporary interruptions of duration less than ten minutes
- (c) Outages due to failure of upstream power system including generation and transmission network.
- (d) Outages due to Force Majeure reasons beyond the Licensee control like fire, earthquake, floods, storms, and riots.

Within one year of coming these regulations into force, the Licensee shall declare Reliability Index (RI) in the form of SAIDI & SAIFI in its area of supply and shall publish it in local newspaper having wide circulation in that area. The Reliability Index shall cover all cities and towns up to the District Headquarter towns as also for rural areas.

The Commission shall fix benchmarks for standards of reliability on the basis of data collected for one year and revise the levels to be achieved from time to time for ensuring improvement in the performance of the Licensee

e. Voltage Variation Limits

Licensee shall ensure that long duration voltage variation at the point of commencement of supply to consumer as defined in Indian Electricity Rules, 1956, shall not vary from the declared voltage as below:

Type of supply and declared voltage	Variation maximum limit %	Variation minimum limit %
230 Volts single phase 50 Hz AC supply	6% of declared voltage	6% of declared voltage
400 Volts three phase 50 Hz AC supply	6% of declared voltage	6% of declared voltage
11000/22000 Volts three phase 50 Hz AC supply	6% of declared voltage	9% of declared voltage
33000 Volts three phase 50 Hz AC supply	6% of declared voltage	9% of declared voltage

The complaints with respect to voltage variation limits shall be established through portable voltage recorders or meter reading instruments.

f. Voltage unbalance

The Voltage unbalance shall not exceed the following limits:

Voltage Level	Limit of voltage unbalance	Implementation Stage
33 kV level	3%	As specified by CEA Grid Connectivity Regulation 2004
11 kV/22 level	3.5%	As specified by CEA Grid Connectivity Regulation 2004

SCHEDULE – II

[see regulation 2(13)5(2) and 15]

STANDARDS FOR RESPONSIBILITY CENTRE

	Performance Measure	Target levels	Effect Measured	Data Sources/ Responsibility Centre	Reporting Periodicity	Implementation Phasing
	Pre Requisites					
1	Establishment. of call centres		Time Schedule	Board	Bimonthly	As per Schedule I
2	Establishment of Meter Relay Testing Teams (On site testing, MRI downloads)	6 teams per month	Detection of defective/slow/burnt meters	Board	Quarterly	Six months
3	Establishment of Human Resource Database	3 months – out sourcing	Time Schedule	Board	Bimonthly	One month
	Consumer Services					
1	No. of complaint received per year to total number of consumers (%)	0.5%	Service Quality	Complaint Registers at Complaint Centre or Consumer Call Centre	Quarterly	One month
2	Ratio of staff attending complaints per thousand consumers (Skilled /Unskilled staff separately identified)	1	Adequacy of complaint staff for consumer services	Estb. Records/HR Database	Quarterly	One month
	System Reliability					
1	Availability of manpower (Across Cadres), equipments to conduct the study	5	SAIFI, SAIDI, CAIDI & CAIFI Study	System Planning	Quarterly	One month

	Operational Performance					
1	Energy Auditing – Feeder wise		Loss levels	System Planning	Monthly	One month
2	Loss estimation of Technical & commercial across voltage levels and consumer categories	12 months for Board	Loss levels	System Planning	Monthly	One month
3	Unplanned outage/total outage (Fault breakdown / total outage)	<10%	Relative impact of outage plan for maintenance in minimizing fault breakdown	SE (operation circle)	Monthly	One month
4	Annual replacement rate of Distribution transformers (%): (Distribution Transformers replaced / Transformers in service)	2%	Effectiveness of preventive maintenance and protection provided	SE (operation circle)	Quarterly	One month
5	Phased unmanning of distribution sub stations	Linked to retiring personnel	Automation	SE (operation circle)	Quarterly	One month
	Metering, Billing and Collection					
1	Number of Meters per Meter Reader a) Urban b) Rural	Depends on meter reading cycle	Adequacy of meter reading staff	HR Database	Quarterly	One month
2	Number of meter readings done per meter reader per month a) Urban b) Rural	100 per day 50 per day	Productivity	Sub-divisions	Quarterly	One month

3	Meters defective & damaged / Meters in service	5%	Adequacy of meters technology and life expectancy of meters	Meter Testing Lab and Consumer service records	Quarterly	One month
4	Average level of customer arrears (days/customer)	90	Collection efficiency	Revenue Registers/ Billing Database	Quarterly	One month
5	Number and amount involved in customer litigation cases	<0.5 % of revenue from Standards of Performance	Quality of service, Customer responsiveness	Operation and Maintenance Circle	Monthly	One month
6	Infusion of Technology (Spot Billing Machine, Pre Paid Meters, Internet Banking, ECS, etc) Number of computerized bills/Number of manual bills		Technology Adoption	Circle Heads	Quarterly	One month
	Human Resource Management					
1	Employees per 1000 customers	16 (Gradually should decrease)	Employee Strength	HR Database	Quarterly	One month
2	Employee cost per unit of retail sales	1.00	Labor cost efficiency	Financial records	Half Yearly	One month
3	Training participation days per employee	Once in every 3 years	Adequacy of training	HR / Training records	Half Yearly	One month
4	Terminal Liabilities Evaluation	3 months-out side actuary valuation outsourcing	Future cost implications	Secretary of Board	Yearly	One month

	Financial & Material Management					
1	Annual capital expenditure/net book value		Financial Efficiency	Accounts	Yearly	One month
2	Distribution cost/Energy sales across consumer categories	< Re 1	Operational Efficiency and Cost control	Accounts	Yearly	One month
3	Employee cost as a percentage of total cost	20%	Employee Productivity	Accounts	Yearly	One month
4	Operating expenses / Revenue from Sale of power	<20%	Financial Efficiency	Accounts	Yearly	One month
5	Cost of capital	12%	Financial Efficiency	Accounts	Yearly	One month
6	Debt Service Coverage Ratio	> 1	Financial Efficiency	Accounts	Yearly	One month
7	Stores Inventory/1000 Km of distribution lines	0.5 Cr	Financial Efficiency	Accounts	Yearly	One month
9	Working Capital to Revenue from Sale of power	< 8%	Financial Efficiency	Accounts	Yearly	One month

Engineering Resources Management – To be operational at the circle level with the overall responsibility of the Superintendent Engineer

	Performance Measure	Target Level	Data Sources/ Responsibility Centre	Reporting Periodicity	Implementation Phasing
A	Construction Norms (per Km)				
1	33 kV Line work	To be specified by the Commission within three months from the date of notification of these Regulations.			
	(a) Man days for Lineman		Estb. Records/HR Database	Quarterly	Six months
	(b) Man days for Helpers & Unskilled Workers		Muster Rolls/ Estb. Records/HR Database	Quarterly	Six months
2	11 kV Line work				
	(a) Man days for Lineman		Estb. Records/HR Database	Quarterly	Six months
	(b) Man days for Helpers & Unskilled Workers		Muster Rolls/ Estb. Records/HR Database	Quarterly	Six months
3	LT Line work				
	(a) Man days for Lineman		Estb. Records/HR Database	Quarterly	Six months
	(b) Man days for Helpers & Unskilled Workers		Muster Rolls/ Estb. Records/HR Database	Quarterly	Six months
4	33/11 kV Sub-Station Construction work				Six months
	(a) Man days for Lineman		Estb. Records/HR Database	Quarterly	Six months
	(b) Man days for Helpers & Unskilled Workers		Muster Rolls/ Estb. Records/HR Database	Quarterly	Six months
5	11 / 0.4 kV pole mounted Sub-Station Construction work			Six months	
	(a) Man days for Lineman	Estb. Records/HR Database	Quarterly	Six months	
	(b) Man days for Helpers & Unskilled Workers	Muster Rolls/ Estb. Records/HR Database	Quarterly	Six months	

