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Electricity Regulatory Authority
Ministry of Energy and Natural Resources

Distribution Code Regulation 2025

Electricity Regulatory Authority
Ministry of Energy and Natural Resources

Foreword

With the establishment of the Electricity Regulatory Authority (ERA), erstwhile Bhutan Electricity Authority (BEA), under the Electricity Act of Bhutan 2001, a foundation for the regulatory framework for the electricity sector was instituted. In keeping with this mandate, the first Distribution Code Regulation was issued in 2008 to guide the distribution licensee and ensure a consistent approach to electricity distribution.

Since then, the Distribution Code Regulation has undergone several revisions to keep pace with the sector's evolving needs, including grid expansion, integration of renewable energy, and improvements in service reliability. The Distribution Code (Amendment) Regulation 2022 was part of this ongoing effort to strengthen the regulatory framework and support Bhutan's energy security objectives.

Building on these efforts, a second amendment was undertaken to address emerging challenges such as increasing demand, integration of distributed energy sources, aging infrastructure and power quality concerns. The amendment aimed to improve operational efficiency, and ensure the framework remains responsive and relevant to current sector developments. It also aimed to strengthen mechanisms for addressing consumer concerns by ensuring timely and effective resolution of grievances, thereby enhancing accountability and improving overall service delivery with the electricity sector. The Distribution Code Regulation 2025 had incorporated all these aspects to facilitate seamless and efficient operation of the electricity sector.

We are pleased to present the amended regulation, which reflects our ongoing dedication to support the electricity sector through adaptive and progressive regulatory measures.

We sincerely thank all stakeholders for their valuable contributions and look forward to your ongoing support in its implementation.

Signature of Chairperson

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CHAPTER 1
PRELIMINARY

Title and Commencement

1. This Regulation is called the Distribution Code Regulation 2025; and
2. This Regulation comes into force from April 21, 2025.

Scope

3. The provisions of this regulation shall be applicable to the users of the distribution system as detailed, except where an exemption is granted by the Electricity Regulatory Authority.

4. The guaranteed service level specified in schedule II of this regulation shall apply to HV consumers directly connected to the transmission system and must be complied by the licensee.

5. This regulation shall extend to the whole of the Kingdom of Bhutan.

Objective

6. The objective of this regulation is to define and standardise the following activities so that these are undertaken in a safe, reliable, and efficient manner:
   (1) The planning of a distribution system to meet present and future load demand;
   (2) The operation, and maintenance of a distribution system by the licensee;
   (3) The distribution of electricity by licensee for supply to its customers by deploying required equipment and network installations comprising the distribution system;
   (4) The connection of a customer's electrical installation to the distribution system of a licensee;
   (5) The connection of embedded generator to the distribution system of licensee;
   (6) The guaranteed service level to be maintained by licensee; and

(7) Distribution of electricity by a designated user receiving single-point supply from the licensee to other establishments under his jurisdiction.

Revocation

7. This regulation revokes and supersedes the Distribution Code (Amendment) Regulation 2022.

Dispensation

8. Nothing contained in this regulation shall have effect, in so far as it is inconsistent with the provisions of the Electricity Act of Bhutan 2001 and regulations framed under the law.

Unforeseen Circumstances

9. If circumstances not envisaged by the provisions of this regulation arise, the licensee shall, to the extent reasonably practicable, consult with all affected users to reach an agreement for the further course of action. If agreement between the licensee and affected users is not reached in the time available, the licensee shall follow a prudent course of action and provide the reasoning thereof, keeping the nature of unforeseen circumstances and the technical parameters of the affected user's system in mind. Under such an event, the affected users as the case may be, shall comply with the instructions given by the licensee, which shall be communicated in writing. The licensee shall inform the Authority about all such cases and request for incorporation of any changes during future revisions.

CHAPTER 2
CONDITIONS OF SUPPLY

Objective

10. The objectives of this section are:
    (1) To ensure that the technical, design, and operational criteria specified in this regulation are fully complied with for new connections or augmentation of existing connections with the distribution system;
    (2) To establish the general requirements and compliance for all users seeking to connect to the distribution system or seeking to modify an existing connection with the distribution system;
    (3) To specify the technical arrangements required at the interface boundary between the distribution system and the user's equipment that are applicable at all voltage levels;
    (4) To ensure that a new connection to the distribution system neither exerts any adverse effect on the existing users nor shall a new connection suffer adversely due to use of the distribution system by existing users;
    (5) To specify the requirements that are applicable to all existing or prospective users, including, but not limited to, embedded generators and prosumers; and
    (6) To facilitate data exchange between the users who are connected to the distribution system.

Scope

11. The conditions of supply shall apply to the following users:
    (1) Consumers;
    (2) Embedded Generators;
    (3) Prosumers;
    (4) Generation Licensee; and
    (5) Distribution Licensee.

Connection Application Procedure

12. Application for connection

(1) An applicant seeking connection to distribution system or an existing user seeking modification to an existing connection shall submit an application for connection to the licensee.

(2) For medium and low voltage consumers, the application shall be as per the procedures and formats prescribed in the applicable terms and conditions for supply of electricity issued by the licensee for these consumers.

(3) For other users, the application shall be as per procedures and formats to be specified by the licensee.

13. Data Requirement

(1) Any person or entity seeking connection to licensee's distribution system or any existing user seeking modification in an existing connection shall furnish data in formats prescribed by licensee. Incomplete and insufficient data submitted by the applicant, unless corrected, shall entitle the licensee to withhold the grant of connection or any modification to an existing connection as may be applied for.

(2) An embedded generator shall provide to the licensee information on the generating plant and the proposed interface arrangements between the generating plant and the distribution system. The embedded generator shall furnish the information for each generating unit in the format specified by licensee along with the application for connection with distribution system.

(3) A prosumer shall provide technical details in the prescribed format of licensee for installation, interconnection, and metering of grid-interactive distributed energy resource systems (DERs) to be installed at their premises to enable licensee to conduct a technical feasibility study as will be required.

(4) The licensee, when necessary, shall ask for any additional information as may be necessary to permit a full assessment of the effect of the applicant's load on the distribution system. Such additional information, if necessary, shall also be furnished by an embedded generator and prosumer to enable assessment by licensee of the effect of the connection and interface arrangements on the distribution system. The applicant, embedded generator, and prosumer, as the case may be, shall submit such additional

data to licensee within the prescribed time.

Connection Agreement

14. The applicant seeking a new connection or requesting modification for a connection shall enter into an agreement with the licensee in the prescribed format.

15. Prosumers interested in installing and generating electricity from DERs installed in their premises shall be required to enter into a prosumer agreement. This shall be developed by licensee as per extant regulations in force, specifying therein technical standards and safety requirements for installation and interconnection arrangements, metering and billing arrangements, and dispute resolution mechanisms.

16. Embedded generators to be connected to distribution system are required to enter into a connection agreement with the licensee, giving the terms and conditions for connection to and use of distribution system.

17. Licensee and the user shall be responsible for compliance with safety as indicated in the connection agreement.

18. The connection agreement shall lay down the terms and conditions for connection to and use of the distribution system. The connection agreement shall include (but not limited to), as appropriate, the following terms and conditions:
    (1) A condition requiring both parties to comply with the Distribution Code Regulation;
    (2) Details of connection, technical requirements, and commercial arrangements, including the schedule of tariff for access to and use of the distribution system;
    (3) Details of any capital expenditure arising from necessary reinforcement or extension of the system and demarcation of the same between the concerned parties;
    (4) Site responsibility schedule; and
    (5) Minimum requirement on protection for safe and reliable operation of the distribution system.

19. In addition to the above terms and conditions, the licensee shall also ensure the following in the connection agreement for maintaining an efficient, coordinated, and reliable supply of electricity:
    (1) Compliance with guaranteed service level; and

(2) Compliance with safety and other related provisions.

20. Site Responsibility Schedule
For each new connection with distribution system or modification of an existing connection required, licensee shall prepare a site responsibility schedule indicating the following for each item of equipment installed at the connection site as per the format specified by the licensee:
(1) The ownership of equipment;
(2) The responsibility for control of equipment;
(3) The responsibility for maintenance of equipment;
(4) The responsibility for operation of equipment;
(5) The coordinator at the site; and
(6) The responsibility for all matters relating to safety of persons at the site.

Connection Points and Boundaries

21. In accordance with Grid Code Regulation 2024, licensee shall comply with connection condition and meet the minimum technical requirements for connection to the transmission system and also develop standard procedures for carrying out operational activities at the connection site. The boundary between the transmission system and distribution system shall be as defined in the Grid Code Regulation 2024.

22. Voltage for interconnection of generators with distribution system shall be 33/11/6.6 kV or as agreed to with licensee. The connection point shall be mutually agreed between the generating station and the licensee. Generator shall maintain all the terminals, communication, and protection equipment provided in the switchyard of the generating station.

23. The provision, ownership, operation, and maintenance of the metering system between generation licensee and licensee at interconnection point shall be as per metering section of this regulation. The licensee shall maintain all electrical equipment and other assets from the gantry onwards.

24. The provision, ownership, operation, and maintenance of the metering system between the user and licensee at connection point shall be

indicated in the connection agreement enumerated in metering section.

25. The point of commencement of supply of energy to a consumer shall be at the incoming terminal of the cut-out or other isolating device installed by the consumer as per the terms and conditions of the electricity supply for low and medium voltage consumers issued by licensee.

26. The point of commencement of supply by an embedded generator to licensee shall be at the incoming switchgear installed as per the interconnection arrangement made with the licensee.

Technical Requirements of Connected Equipment

27. The equipment connected to the distribution system shall meet the following requirements:
    (1) All equipment connected to the distribution system shall be of such design and construction as to satisfy the requirements of the codes and relevant international standards;
    (2) Installation and commissioning of all electrical equipment works shall comply as per standard rules and practices;
    (3) For each new connection, licensee shall specify the connection point and the voltage of supply, along with the metering and protection requirements;
    (4) Insulation levels of the users' equipment shall conform to applicable standard or code;
    (5) Protection and metering of the connected equipment shall be in accordance with metering and protection system section of this regulation; and
    (6) All electrical equipment, including conductors, cables and other components, installed at the premises of LV & MV consumers shall also comply with relevant international standards.

Notification to Customers

28. If licensee becomes aware of its failure to comply with any obligation under this regulation, which can reasonably be expected to have a material or adverse impact, it shall:
    (1) Inform the customer likely to be adversely affected by the non-compliance at the earliest but not later than five (5) days;

(2) Undertake an investigation of the non-compliance as soon as practicable but in any event within twenty (20) days; and
(3) Advise the customer of the steps it is taking to comply.

29. The licensee becomes aware of a breach of this regulation by a customer, which can lead to a material or adverse impact, licensee shall notify the customer in writing of:
(1) Details of the non-compliance and its implications, including any
(2) Impact on the licensee and other customers;
(3) Actions that the customer could take to remedy the non-compliance;
(4) A reasonable time period in which compliance must be demonstrated; and
(5) Any consequences of non-compliance if not remedied within such reasonable period.

Disconnection of Supply

30. Licensee shall not disconnect supply to a customer's premises unless in situations outlined herein under:
(1) The customer has not fulfilled an obligation to comply with this regulation as notified under section 29 within the reasonable notice period thereof;
(2) The customer fails to comply with the notice or enters into an arrangement to comply but fails to comply with that arrangement; and
(3) The customer fails to pay the bill within the specified period after serving a disconnection notice.

31. Safety and Emergency
(1) A licensee may disconnect supply to a customer's premises immediately if continuation of supply otherwise would pose safety hazards to life and property, or potentially endanger or threaten to endanger the safety of any person or the environment, or an element of the environment, or if there is otherwise an emergency.
(2) The licensee may disconnect instantly the supply to a customer's premises in the case of an emergency, or where there is a need to reduce the risk of fire where relevant regulations require.
(3) In non-emergency situations, including potential safety risks that do not require immediate action, licensee must not disconnect a

customer's supply address unless the licensee has:

(a) Given the customer written notice of the reason;

(b) Allowed the customer five (5) days from the date of receipt of the notice or ten (10) days from the issue of notice; and

(c) At the expiration of another five (5) days as provided in section 31. (3) (b) of this regulation, served notice of its intention to disconnect the customer. (the period of five (5) days is to be reckoned from the date of receipt of the notice or ten (10) days from issue of the notice whichever is earlier.)

32. Customer's Request

The licensee shall disconnect supply to a customer's premises if the cutomer has requested disconnection and has notified the licensee. Such notice shall be served to licensee at least five (5) days in advance, subsequent to which the licensee shall disconnect the supply as stipulated under the applicable terms and condition of supply of electricity.

33. Illegal Use of Electricity

A licensee may disconnect supply to a customer's premises immediately after serving the disconnection notices if:

(1) The supply and sale of electricity to a customer's electrical installation is used for any purpose other than that specified in the connection agreement;

(2) Customer takes at his premises electricity supplied to another premises or supply address;

(3) A customer tampers with, or permits tampering with, the meter or associated equipment; or

(4) Any unauthorized use of electricity or tapping of electricity lines is noticed.

Connected Plant Restrictions

34. Safety

(1) Any equipment of the users including but not limited to underground and overhead lines switchgear, transformers and meters, internal cables and wiring, etc., shall strictly conform to safety standards in respect of established quality norms of manufacture and testing practices, erection and location of installation, and earthing of the installation.

(2) The consumers shall comply with Safety Code (Amendment) 2021

and Safety Regulations 2008 and their subsequent amendments issued by the Authority.

35. Insulation

The users' systems must be designed with a proper basic insulation level conforming to laid-down specifications as applicable. Insulation of all components in service must have adequate dielectric strength for withstanding the system operating voltages at all times as well as transient faults occurring in the electrical system.

36. Clearances

Any and all overhead lines erected, underground lines laid, equipment installed, and facilities set up must have adequate horizontal and vertical clearances with respect to ground and with respect to one another as provided in the Safety Code (Amendment) 2021.

37. Earthing

All components of users' systems must be properly earthed as per applicable rules and international standards. Earthing arrangements shall be compatible with short-circuit ratings specified for individual equipment, including components and accessories, if any, and carried out as per established design principles. Metallic supports of overhead lines and cable sheaths and shields of underground cables shall also be earthed appropriately in accordance with design specifications. Good utility practice shall be adopted for the earthing of all such equipment of users to be connected to distribution system.

38. Motor Starters

The starters provided for the motors of the users shall be of such type and design that the starting current is less than six times the full-load current.

39. Access to Licensee

The licensee and its authorized representative(s) shall have the right to inspect the equipment and installations of the user to ensure conformity with standards and specifications before charging the user's system and also carry out inspections periodically. The users shall facilitate access to the authorized representative of the licensee for the purpose of:

(1) Inspecting, testing, repairing, or altering the electric supply lines, meters, fittings, works and apparatus for the supply of electricity belonging to the licensee; or

(2) Ascertaining the amount of electricity supplied or the electrical quantity contained in the supply; or

(3) Removing where a supply of electricity is no longer required, or where the licensee is authorised to remove and disconnect such supply, including any electric supply lines, meters, fittings, works, or apparatus belonging to the licensee; or

(4) As necessitated by the licensee for the performance of his duty.

40. Unintended and Unscheduled Back-Energisation

The users shall take adequate precautions to ensure that no part of the distribution system is energized by the user's system or from another source via the user's system unless the licensee has a connection agreement with the user to such effect or as an exceptional arrangement, requisitions such supply in writing. The protection and control equipment of the user's systems shall be so designed as to prevent back-energisation of the distribution system.

41. Harmonic Current

Licensee shall incorporate a suitable clause in the connection agreement for restricting the harmonic injection by the users into distribution system. The maximum total levels of harmonic distortion at any connection point on the distribution system from all sources shall not exceed:

(1) Total harmonic distortion of 5% at 33 kV, 11 kV, and 6.6 kV; and

(2) Total harmonic distortion of 8% at 415 V and below.

42. Voltage Flicker Generated by Users

Licensee shall incorporate a suitable clause in the connection agreement to restrict the current fluctuations in the user's electrical system, leading to the occurrence of voltage flicker in distribution system.

43. Power Factor

Low power factor results in underutilization of capacities of equipment, overhead lines and cables of the licensees and generators. The connection agreement shall specify the limit of power factor of the loads connected to the distribution system, and all such loads shall maintain at all times

a power factor of 0.85 and above.

Interface with Embedded Generators

44. If licensee has an interface with any embedded generator, the licensee and the concerned owner of the generating unit shall also abide by the following provisions:

(1) Generating units up to five (5) MW

The owner of the generating unit shall provide suitable protection at the interface to protect his system from any damage due to normal and abnormal conditions in the distribution system. The owner shall install an appropriate metering arrangement for the reactive energy exchanged, in addition to metering section. The frequency variations shall be conforming to the provisions of the Grid Code Regulation 2024 in case the generating units are kept synchronized with the transmission system.

(2) Generating units of above five (5) MW

The owner of the generating unit shall provide suitable capacitors to compensate the reactive power drawl and enter into a connection agreement with the licensee.

Operational Labelling

45. The licensee and each user of the distribution system shall be responsible for providing and maintaining clear, unambiguous signs and labels indicating the numbering and names of equipment or apparatus and circuits at the substations and connection sites. Each piece of equipment such as a transformer, circuit breaker or an isolator shall be labelled by a unique number.

Temporary Power Supply

46. Service lines for temporary power supply shall be laid by the licensee wherever possible and the cost incurred in providing, laying, maintaining, and removing such service lines shall be paid by the user. The licensee, however, at its sole discretion, may allow the user to lay, maintain, and remove such service line at his cost, using the user's own material.

47. The user will be required to pay energy charges and all other charges as per the norms fixed by the licensee for such temporary power supply under its miscellaneous charges as issued by the Authority from time

to time.

48. The customer shall apply for the renewal of a temporary power supply before its expiration if an extension is required beyond the two (2) year period. Unless otherwise approved by the licensee, the temporary power supply shall be defined as installations intended for removal within a period not exceeding two (2) years.

CHAPTER 3
ASSET MANAGEMENT

Objective

49. The objective of this section is to ensure that good asset management practices are adopted by the licensee in order to enable asset creation in conformity with quality standards, maximise asset life, and encourage improvement and innovation in distribution services.

Asset Management Practices

50. A licensee shall endeavour to:

(1) Assess and record the nature, location, condition, useful or residual life, and performance of its distribution system assets;

(2) Develop and implement plans for the acquisition, creation, operation, maintenance, refurbishment, repair, and disposal of its distribution system assets, and also propose plans for augmentation and establishment of transmission connections serving the distribution system, by implementing the following measures:

(a) Establishing standard operating procedures (SOPs) and undertaking root cause analysis of failures to ensure reliable distribution system operations;

(b) Adopting condition monitoring practices and drawing up schedules for preventive, condition-based, and predictive maintenance to minimise the risks associated with the failure or reduced performance of distribution assets;

(c) Adopting suitably N-1 or N-2 criterion for the design of distribution system, as the case may be, in order to ensure that supplies to critical consumer installations are restored with minimum or no interruptions and loss of load in the event of failure of one or more network components;

(d) Optimising network configurations for serving load demand and taking into account distribution losses to minimise costs to consumers; and

(e) Complying with the laws and other performance obligations which apply to the provision of distribution services, including those contained in these regulations.

(3) Develop, test, simulate, and implement contingency plans to deal with events which have a low probability of occurring, but are realistic and have a substantial impact on supply to consumers.

Maintenance of Substation and Distribution Lines

51. Licensee shall coordinate the maintenance works of all substations with the operation of the transmission system to which the distribution system, or part thereof, is connected, so as to ensure coordinated, reliable, and secure electricity supply.

52. Licensee shall prepare a maintenance schedule for various line and substation equipment installed in distribution system.

53. The maintenance schedule shall have the following components:
    (1) Planned schedule for inspection;
    (2) Planned schedule for preventive, condition-based, and predictive maintenance; and
    (3) Planned schedule for refurbishing, overhaul, or replacement.

54. Licensee shall carry out annual preventive maintenance works on all equipment such as power transformers, distribution transformers, voltage transformers, current transformers, circuit breakers, and isolator switches, and the details of maintenance works carried out shall be entered in a register.

55. Apart from annual maintenance, the licensee shall carry out inspections at regular intervals on all 33kV, 11kV, and LV lines.

Consumers' Electrical Installation and Equipment

56. A consumer shall endeavour to:
    (1) The electrical installation and any equipment within the premises:
        (a) Complies with the Distribution Code Regulation;
        (b) Complies with the Internal House Wiring Rules and Regulations, where applicable; and
        (c) Is maintained in a safe condition.
    (2) Operation of protection equipment is effectively coordinated with the distribution system.
    (3) The distribution system and the reliability and quality of supply to other users are not adversely affected by his actions or due to any equipment of his electrical installation.

(4) Use of electricity supplied is in accordance with the tariff category for which the connection has been provided.

(5) Supply of electricity to his electrical installation is not used by any other person except in accordance with the Act.

(6) Meter is not bypass or tampered.

Licensee's Equipment on Consumer's Premises

57. A consumer must:

(1) Not interfere with the licensee's system, including any of the licensee's equipment and its components installed in or on the consumer's premises; and

(2) Provide and maintain in its premises the agreed facility required by the licensee to protect any equipment of the licensee.

58. A consumer must provide to the licensee and its authorised representatives convenient and unhindered access:

(1) To the licensee's equipment for any purposes associated with the supply, metering, or billing of electricity; and

(2) To the consumer's electrical installation for the purposes of inspection or testing for assessing whether the consumer is complying with this regulation and disconnecting supply if events of non-compliance with this regulation are evidenced and subsequent reconnection of supply after removal of the cause of such non-compliance.

59. In cases other than emergencies, a licensee shall endeavour to access a consumer's premises at a time which is reasonably convenient to both the consumer and the licensee.

Distribution Performance Report

60. Licensee shall submit a performance report to the Authority annually as per the requirements of Regulatory Reporting Regulation 2025.

Inventory Management

61. Licensee shall identify the inventory of materials and their components along with stock of critical apparatus and their spare parts that are to be kept in stock so that on the occurrence of line faults or equipment

failure of predictable nature, rectification measures including repair and replacement works can be commenced on an immediate basis.

62. Licensee shall maintain a list of stock of identified spares and spare parts that are necessary in the course of regular maintenance works to be conducted on switchgear, protective relays, transformers, metering equipment, line hardware and insulators and other apparatus used in the operation of the distribution system.

CHAPTER 4
DISTRIBUTION OPERATING CODE

Introduction

63. This section contains the rules, procedures, and practices to be followed by the licensee and users of the distribution system for safe, reliable, and efficient operation of the distribution system. Operational matters pertaining to interfaces between distribution and transmission systems shall conform to the Grid Code Regulation 2024.

64. The following aspects of distribution system operation are covered in this section:
    (1) System of supply;
    (2) Quality of supply;
    (3) Load balancing;
    (4) Demand forecasting;
    (5) Outage planning for maintenance;
    (6) Contingency planning and disaster management;
    (7) Demand management and load shedding;
    (8) Metering;
    (9) Protection system;
    (10) Safety coordination;
    (11) Human resource development;
    (12) Complaint handling; and
    (13) Geographical Information System (GIS) based mapping of distribution infrastructure and consumer connections.

Objectives

65. The objective of distribution operating code is to achieve the following:
    (1) To establish rules, procedures, and arrangements for safe, stable and efficient operation of the distribution system;
    (2) To enable licensee to coordinate and integrate the operation and maintenance with other users, connected to distribution system;
    (3) To ensure safety of persons and properties while work is being done on the distribution system; and

(4) To provide for the exchange of information.

Distribution Operating Procedure

66. To ensure compliance with the provisions of this regulation, licensees shall develop and maintain distribution operating code and furnish copies to the Authority.

System of Supply

67. The declared frequency of AC supply is 50 Hz.

68. The declared voltage of AC supply is as follows:

System of Supply	Voltage Level	Limits of Variation
LV	Single Phase: 230 V between phases and neutral Three Phase: 400 V between Phases	±6%
MV	66 kV, 11kV, 33kV	±10%

69. The voltage variation limits at the interface between the distribution and transmission systems shall comply with sections 81, 82, and 83 of the Grid Code Regulation 2024.

70. The system of supply shall be determined by the licensee depending on the contract demand of the consumer and shall normally be as follows:

Contract Demand	Supply system
≤ 10 kW	Single phase, 230V
>10kW & ≤30kW	3 phase, 400V through direct connected meter
>30kW & ≤100kW	3 phase, 400V through direct connected or CT connected meter
>100kW & ≤300kW	3 phase, 400V through CT connected meter

>300kW & ≤3MW	6.6kV, 11kV or above through CT/PT connected meter
>3MW & ≤15MW	33kV or above through CT/PT connected meter

* The contract demand in case of LV consumer is the estimated demand based on the information given on the nameplate of appliances and the rated loads, and number of power, lighting and fan points, furnished by the consumer duly verified by the licensee. (At the time of application for new connection or for increase or decrease in demand, unless such demand is warranted to be furnished by the consumer for appropriate customer categorization, based on the tariff schedules, revised from time to time by the Authority.)

71. The licensee may, however, at its discretion, also supply at any other voltage depending on system availability as well as adaptability in accommodating the load requisitions of consumers.

Quality of Supply

72. Supply Frequency
    (1) The system operator shall coordinate for maintaining the system frequency between 49.9 Hz to 50.05 Hz as per Grid Code Regulation 2024; and
    (2) The licensee shall comply with the directions of system operator in its endeavour to maintain the system frequency.

73. Supply Voltage
    (1) Licensee must to maintain a nominal voltage level at the point of supply to the consumer's electrical installation, subject to tolerance limits stated in section 68;
    (2) Licensee shall endeavour to control voltage in distribution system within the allowable tolerance of its variations unless such variations are beyond the control of the licensee; and
    (3) Licensee must monitor and record steady state voltages and variations at each zonal substation in its distribution system where such voltage limitations are not applicable.

74. Power Factor
    (1) The consumers shall maintain an average power factor of not less than 0.85;
    (2) Licensee reserves the right to refuse to supply an apparatus, or

undertake any installation at a consumer's premises where in its opinion the average power factor of the installation is less than 0.85;

(3) Licensee shall take power factor improvement measures at strategic points in distribution system by carrying out system studies and installing the required reactive power compensation equipment;

(4) When required by the licensee, the consumer shall take reasonable time, not exceeding three (3) months, to take such effective steps as to raise the average power factor of installation to a value not less than 0.85. Notwithstanding this provision, the licensee in the interest of system regulations, may at its discretion, disconnect the supply till such remedial measures are taken by the user without giving notice; and

(5) If the consumer fails to take the necessary corrective actions, the licensee reserves the right to disconnect the supply at its discretion without prejudice to the right to impose penalties or take actions under the relevant provisions and agreements.

Load Balancing

75. Licensee shall ensure that the load imbalance between phases in distribution system does not exceed five percent (5%) at the point of commencement of supply.

76. The consumer taking three phase supply shall balance the connected load in such a way that the difference in the loading of each phase does not exceed five percent (5%). In other words, the maximum permissible difference of loads between phases shall be five percent (5%).

77. In case of continued imbalance in the operating loads for three-phase consumers, licensee may at its discretion, notify the consumer to ensure proper balancing of the operating loads within a stipulated period, failing which licensee, at its sole discretion, may discontinue the supply till remedial action is taken by consumer.

Demand Forecasting

78. Licensee shall consolidate the requirement of loads to be served in the entire distribution system and undertake detailed load forecasting study for a period of three (3) years for submission to the Authority under the 'Demand Forecasting Report' (DFR).

79. The DFR shall be submitted to the Authority at the end of the year for review.

80. The DFR shall include realistic demand forecast as specified in Grid Code Regulations 2024 to enable effective management of the power system by system operator and be as per the provisions mentioned in this section.

81. The DFR must include the following planning information for each distribution zone for the forthcoming three (3) year period:
    (1) The forecasted number, type, and load of new connections by customer category including new MV consumers who will be supplied in each distribution zone;
    (2) The forecasted demand growth in terms of both energy and peak demand; and
    (3) A plan for meeting forecasted demand to be met by facilitation of embedded generators as well as system and network augmentation, upon assessment of net load in distribution system after accounting for increasing renewable energy penetration and deployment of grid-interactive DERs.

82. The basis of demand estimation shall be on following inputs:
    (1) Historical information;
    (2) Typical requirement of MV and estimated demand of LV consumers on the basis of relevant load data and/or hourly load curves subject tomodifications dependingupon the communications received from such consumers. Licensee may also identify such major consumers who only shall be required to furnish data pertaining to their installations to the licensee on demand for the purpose of demand estimation;
    (3) Availability of embedded generators and prosumers to assess net load demand and construction of hourly and diurnal load curves;
    (4) A safety margin to factor in contingencies; and
    (5) Estimation of system losses.

83. Licensee shall consolidate the requirement for the entire distribution system and shall furnish the same to system operator as specified in Grid Code Regulation 2024.

84. Licensee shall prepare and maintain adequate historical data and shall use scientific techniques and methods for demand estimation and forecasting by carrying out deterministic and probabilistic studies.

85. In the event any unforeseen event causes change in the demand to be served in the entire distribution system or at a particular interconnection, necessitating revision of forecasted demand and projected net loads, the revised values shall be promptly intimated:
    (1) By users to the licensee of increase or decrease in demand;
    (2) By embedded generators to licensee of increase or decrease in generation;
    (3) By prosumers to licensee of increase or decrease in export and import of energy; and
    (4) Licensee to system operator of net load requirements.

86. The DFR shall also contain the following investment information for each distribution zone for the forthcoming three (3) year period:
    (1) Estimate of investments in network augmentation to meet present and projected load demand;
    (2) Investments in network automation and smart grids to improve efficiency of network operations;
    (3) Investments in resilient network infrastructure and technologies that can better withstand severe weather-related incidents and minimise outage periods for critical network sections;
    (4) Investments in smart meters at feeder, distribution transformer and consumer ends to improve energy accounting, metering and billing efficiencies; and
    (5) Investments in operational systems and processes to promote integration of DERs.

Outage Planning for Maintenance

87. Outage planning by licensee shall be coordinated with both the work plan of transmission operation and instructions of system operator as per provisions specified in Grid Code Regulation 2024 to minimise supply interruptions.

88. The outage program shall contain identification of equipment and distribution lines of distribution system operating at voltage level of 11

kV and above that are proposed to be taken out of service, along with information on date of start of outage, duration of outage and estimated quantum of load curtailment during outage.

89. Before any distribution lines or equipment of 11 kV and above are taken out of service, the licensee shall inform the transmission function even though the same is already included in the approved outage plan.

90. The above procedure shall not apply under the following circumstances:
    (1) In cases where the estimated drawl at connection point is not affected;
    (2) Actions taken to deal with emergency situations to protect equipment and associated components from damage;
    (3) In case of unforeseen emergency situations requiring isolation of equipment or distribution lines to prevent safety hazard to life and property; and
    (4) Disconnection to be affected on any user's installation due to non-compliance with or violation of agreement. In such cases the system operator shall be informed wherever the load to the extent of two (2) MW or more is affected.

91. Planned outage of power system for maintenance purposes shall be intimated to the public through advertisement in the national newspaper or other media appropriate not less than two (2) days in advance.

92. Outage of User's Plant
    (1) All users shall submit their tentative outage plans in advance to licensee. The MV consumers, embedded generators and prosumers shall each indicate three preferred options of the date of commencement of outage. Licensee shall endeavour to harmonize the outage plan of its distribution system elements so as to synchronise with user's planned outages, and the integrated outage plan shall be communicated to the users. Licensee shall endeavour to accommodate the first preference dates of outage commencement of the users. The licensee may convene coordination meetings with the users before finalizing the outage plan.
    (2) As specified in Grid Code Regulation 2024, embedded generators having their generating units synchronised with transmission

system are also required to follow instructions of system operator for coordinating their outage plans.

Contingency Planning and Disaster Management

93. A contingency situation may arise in the event of a total or partial blackout in the transmission system due to electrical faults, system disturbances or adverse weather impacts. During such events, licensee shall render assistance in system restoration activities by providing services as specified in the Grid Code Regulation 2024.

94. A contingency may also arise on a part of the distribution system due to localised faults, any equipment or line breakdown or weather disruptions. It may also occur due to malfunctioning or breakdown of the apparatus of the transmission at the point of interconnection.

95. Licensee shall develop plans and the procedure for recovery of sections of the distribution system facing outage during contingency situations and ensure full restoration of the affected loads in the shortest possible time. As specified in Grid Code Regulation 2024, licensee shall finalise such plans for supply restoration after partial or total outages in distribution system in coordination with system operator. The procedure shall be regularly updated with change in distribution network configuration and also made available on the website of licensee.

96. Licensee shall provide all assistance for the development of the overall contingency plans for the transmission systems.

97. In cases of failure of the apparatus of the transmission system leading to curtailment of supply to licensee's distribution system, licensee shall immediately contact the authorised person at the substation of the transmission operation and assess the probable period of restoration and restriction of load drawl from the affected substation. On the occurrence of such event, licensee shall examine the feasibility of serving critical loads in distribution system from alternative sources so as to minimise the interruption of supply and also, draw up a plan for curtailing non-essential loads as will be necessary and inform the affected users in writing.

98. Licensee shall prepare a disaster management plan to deal with outages in the distribution system caused by extreme weather-related events and

prioritise restoration efforts to minimise downtime in sections of the network serving critical loads.

99. The plan shall include comprehensive risk assessment to identify vulnerable areas and critical public infrastructure, such as hospitals, emergency services, public water and sewage works, etc., that may be impacted by such events and clearly lay down the procedure to be followed for reporting supply outages affecting such establishments and undertaking their restoration on a priority basis. All efforts shall be made to avoid hazards to public safety arising from electrical installations which are damaged, disturbed, or dislodged due to weather-induced impacts.

100. Detailed plans and procedures including the disaster recovery plan for restoration after partial or total blackout of each distribution zone or part thereof, connected to the transmission system shall be finalized by licensee in coordination with the system operator. The procedure shall be reviewed and revised annually.

Load Shedding

101. Temporary load shedding may be resorted to for maintaining the load-generation balance as advised by the system operator. This may also be necessary due to unanticipated loss of any circuit or equipment, or any other unforeseen operational contingency like any overloading of line(s) or transformer(s).

102. Licensee shall estimate loads that may be shed in discrete blocks at each connection point or in the overall area of supply and inform consumers accordingly. Upon receipt of such intimation, affected consumers shall cooperate with the licensee in this regard and draw up plans for reducing their load demand as and when directed by licensee. Licensee shall work out the sequence of load shedding operations and provide the load shedding program to the system operator as per the provisions specified in Grid Code Regulation 2024. In case of automatic load interruption through operation of under frequency relays installed in the distribution system as specified in Grid Code Regulation 2024, the circuits and the quantum of load to be interrupted in discreet blocks, along with corresponding relay settings, shall be coordinated with the system operator and persons in charge of the substations of the licensee as necessary.

103. In the event prolonged interruptions in supply are unavoidable, licensee shall submit a detailed program for planned load shedding indicating the affected areas, quantum of loads to be interrupted, and timing of proposed load shedding for approval of the Authority. On receiving approval, licensee shall publish the program in the national newspaper and other appropriate media. Licensee shall seek approval from the Authority for any deviation from the approved load shedding program.

104. If the duration of unplanned load shedding in any part of the distribution system exceeds 60 minutes, the affected consumers at MV levels and the essential services such as public hospitals, public water works, sewage works, etc., shall be intimated over the telephone or mobile or SMS or email or other electronic communication medium wherever possible.

Metering

105. This section specifies the procedure for metering in distribution system for operational as well as tariff and commercial purposes.

106. Operational Metering

(1) The minimum requirement of operational metering at licensee's 66kV/33kV or 66kV/11kV or 33kV/11kV substations and transformers shall be as follows:

(a) 66/33/11 kV bus voltage;

(b) 66/33/11 kV incoming or outgoing current in each phase and each circuit or feeder;

(c) Primary and secondary currents in each phase of every transformer; and

(d) Facility to record energy in MWh and MVARh and preferably frequency at a predefined interval at the point of connection with the transmission system by deploying electronic meters, wherever possible.

(2) General

(a) Licensee shall develop a SOP specifying actions for maintenance and upkeep of meters of all categories, including their testing and calibration as per relevant international standards at periodic intervals, and corrective measures, including their replacement or upgrade, as necessary; and

(b) Licensee shall deploy meters employing the latest technology and a smart system to bring operational efficiency and accuracy.

107. Tariff and Commercial Metering:

(1) Tariff metering conforming to relevant international standards shall be provided at the connection points between the user's system and the distribution system and shall be governed by the provisions in the agreement with the user.

(2) All the meters, instrument transformers (CT/PT), metering cubicles, and testing procedures shall conform to the relevant international standards as specified by the Authority.

(3) All the meters and instrument transformers used in conjunction with commercial (tariff) metering shall also be of appropriate accuracy class and conform to the codes and relevant international standards. The rating shall be suitable for catering the burdens of lead wires and metering.

108. General Requirements of Metering Arrangement

(1) At each connection point with an embedded generator or the transmission system, the licensee should meter the following quantities: active energy import, active energy export, reactive energy import, and reactive energy export.

(2) Arrangements for metering, billing, energy accounting, and energy settlements for prosumers shall be in accordance with the provisions laid down in the prosumer agreement to be entered into between licensee and prosumer.

(3) Each metering point associated with the determination of energy exchanged with generation licensees and transmission system shall be provided with both main and check meters. The standard of accuracy of these meters shall conform to the relevant codes and international standards.

(4) In case of electronic energy metering systems, data collection devices shall be used to integrate pulses from meters over each integration period, store values, and transmit the same to the data collection system of the licensee. Data shall be collected from both the main and check metering schemes.

(5) Voltage failure relays shall be provided to initiate an alarm on loss of one or more phases of the voltage supply to the meter.

(6) Main and check meters shall be provided at all connection points with an embedded generator. All the meters shall be tested and calibrated according to the guidelines provided in the relevant codes and international standards at least once a year. Records of these calibrations and tests shall be maintained for reference.

(7) In accordance with Grid Code Regulation 2024, the system operator shall formulate a metering scheme and procedure covering summation, collection, and processing of tariff meter readings at various interconnection sites in consultation with generation licensees and the licensee, encompassing both transmission and distribution systems.

(8) The ownership, responsibility of maintenance, and testing of these meters shall be as mutually agreed to between the users and the concerned licensees.

Protection System

109. No component of any electrical equipment shall be allowed to remain connected to the distribution system unless it is covered by appropriate protection aimed at clearing electrical faults and isolation of the affected equipment with reliability, selectivity, speed, and sensitivity. Suitable protection coordination shall be maintained between the operations of transmission and distribution systems in accordance with the Grid Code Regulation 2024. Licensees shall coordinate with the operating personnel of transmission function to ensure correct and appropriate settings of protection to achieve instantaneous, effective, and discriminatory isolation of faulty line(s) or equipment.

110. The settings of protective relays for 33kV, 11kV, and 6.6 kV lines shall be such that a fault in any section of the network is localised and promptly isolated, i.e., it should not affect the operation of the upstream system. Operating personnel of transmission function shall notify the initial settings at the points of interconnection with distribution system and keep licensee informed from time to time of any subsequent changes made in the settings. Routine checks on the performance of the protective relays shall be conducted and any malfunction shall be noted and corrected as soon as possible. The malfunctions, changes in the system configuration, if any, and revised settings of relays shall be discussed and finalized in the meetings of power system coordination committee.

111. All generating units and all associated electrical equipment of the generation licensee connected to the distribution system shall be protected by adequate protection, as per relevant codes and relevant international standards, so that the system does not suffer due to any disturbances originating at the generating unit.

112. Distribution system: For power transformers of MV class in the distribution system, differential protection shall be provided for 10 MVA and above, along with backup time lag over current and earth fault protection. Transformers of 1.6 MVA and above but less than 5 MVA shall be protected by time lag over current and earth fault relays. In addition, all power transformers shall be provided with gas-operated relays, winding, and oil temperature alarm and or trip protection.

116. Distribution lines: All the 33kV, 11kV, and 6.6 kV lines at connection points shall be provided with a minimum of overcurrent and earth fault relays as follows:
    (1) Plain radial feeders: Non-directional time lag over current and earth fault relays with suitable settings to obtain discrimination between adjacent relay settings; and
    (2) Parallel or ring main feeders: Directional time lag over current and earth fault relay.

113. Licensee shall develop SOP detailing the inspection, testing, and calibration as per relevant international standards to be undertaken at periodic intervals for the full range of protective relays installed in the distribution system.

114. Licensee shall follow a phased program of introducing numeric relays, starting with critical electrical installations to enable high precision in fault detection and multiple protection functions in a single device to improve reliability.

Safety Coordination

115. The objective of safety coordination is to enforce principles of safety as prescribed and to devise codes and practices to implement the same.

116. All adequate protection shall be provided against fire hazards to

all equipment and circuits in the distribution system to ensure fire protection.

117. Licensee and users of the distribution system shall observe safety rules and precautions when work is to be carried out on any apparatus, switchgear, or circuits in any part of the distribution system or users' system.

118. There shall be coordination between personnel of the licensee and its users for carrying out work on any apparatus, switchgear, or circuits belonging to either party at the point of connection.

119. Users receiving single point supply from licensee and engaged in distribution of electricity to establishments under their jurisdiction shall be required to develop operational and safety rules applicable to their system, including all equipment and circuits, generally conforming to Safety Regulation 2008 and Safety Code (Amendment) 2021, and as will be prescribed by licensee.

120. Licensee and users of the distribution system shall observe safety rules and precautions when work is to be carried out on any apparatus, switchgear, or circuits in any part of the distribution system or users' system.The provisions of the Grid Code Regulations 2024 issued by the Authority shall be followed at connection or interface points in coordination with the operating personnel of transmission operations.

121. Licensee and users of the distribution system shall observe safety rules and precautions when work is to be carried out on any apparatus, switchgear, or circuits in any part of the distribution system or users' system.Licensee and users of the distribution system shall observe safety rules and precautions when work is to be carried out on any apparatus, switchgear, or circuits in any part of the distribution system or users' system.

122. Licensee and users of the distribution system shall observe safety rules and precautions when work is to be carried out on any apparatus, switchgear, or circuits in any part of the distribution system or user's system. Licensee and users of the distribution system shall observe safety rules and precautions when work is to be carried out on any apparatus, switchgear, or circuits in any part of the distribution system or users' system. Licensee and all users having a common electrical interface with the distribution system shall designate suitable persons to

be responsible for safety coordination. These persons shall be referred to as safety and control persons. Their designations and telephone, mobile, or email ID shall be exchanged between all the concerned persons. Any change in the list shall be notified promptly to all concerned.

123. The disconnecting device or devices at each electrical interface, which shall be capable of effectively disconnecting the system of licensee and other users and earthing the respective system at the control boundary shall be identified andmarked by the licensee and respective user, and shall be maintained in good order at all times. Such disconnecting devices shall be provided with electrical and mechanical interlocks to prevent inadvertent switching operations by unauthorized persons.

124. Whenever any consumer or user receiving a single point supply and distributing electricity has installed an emergency power supply system, either an electronic system with storage batteries or with generators, the arrangement shall be such that the same cannot be operated without clearly isolating the system from the licensee's supply mains. The responsibility of making the required arrangement for isolation from supply mains shall be of the consumer, and this shall be part of the electrical layout submitted to licensee for his approval. The possibility of back energisation of the distribution system from any of the devices, or any of the conductors, including the neutral conductor, shall be clearly ruled out. Provided that grid-synchronized generation shall be exempted from the above provisions.

125. Permission in writing shall be issued by the appropriate persons being deployed at the electrical interface(s) to their counterparts for carrying out work on any apparatus, switchgear, and circuits beyond the electrical interface(s). Such permission shall be framed as a work permit, the format for which shall be prepared by the licensee.

126. The system of work permit shall be observed for carrying out any maintenance work beyond the electrical interface and shall be duly authorized by the designated person(s). The line shall not be energized back without the return of the work permit after completion of maintenance work.

127. The procedures and checklist shall be issued to all concerned by licensee for implementation.

128. Licensee shall prepare a safety manual incorporating all safety rules

and safety precautions applicable to its distribution system and the user's system and circulate the same among all users for compliance.

Human Resource Development

129. The licensee shall ensure the availability of adequately trained and qualified employees to meet operational, maintenance, and service quality standards.

130. Licensee shall ensure comprehensive training and capacity building for all employees to enhance their proficiency in system planning, design, construction, operation, and maintenance of the distribution system, incorporating modern and latest technologies and safety measures in distribution system.

131. Licensee and users of the distribution system shall observe safety rules and precautions when work is to be carried out on any apparatus, switchgear, or circuits in any part of the distribution system or users' system.Licensee shall be responsible for equipping its officers and employees with knowledge of the guaranteed service level of this regulation.

132. The licensee in coordination with the operating personnel of transmission function and the system operator shall organize an annual training program for capacity building of its operators, including mock simulation exercises, in order to address situations of supply failure in distribution system attributable to outages in transmission system.

Complaint Handling

133. Licensee shall set up a comprehensive complaint management system to record both supply and billing-related complaints received. The system shall include tracking the complaint at every stage till they are resolved and closed.

134. Licensee shall set up appropriate channels for the consumers to register their complaints in one of the following manners:
    (1) Through in-person representation at licensee's designated offices.
    (2) By e-mail to a dedicated email address.
    (3) Online through links provided on licensee's website.
    (4) Over the telephone at customer service unit or contact centres (for supply and billing-related complaints).

135. Licensee shall give wide publicity in the national newspaper and electronic media providing full details for the facilitation of complaint registration by consumers, and also display the information at licensee's website.

136. A docketed system of recording complaints shall be ensured by licensee to enable their end-to-end tracking. The following specific nature of complaints under supply and billing shall be recorded and these records shall be submitted to the Authority annually.
   (1) Number of voltage related complaints received from consumers, remedial measures, and time to remedy;
   (2) Number of fuse-off calls or supply complaints resolved with respect to number of calls or complaints received and average time of restoration;
   (3) Percentage of billing complaints resolved with respect to number of complaints received and average time of closing complaints; and
   (4) Number of new connections provided to consumers vis-à-vis number of new requisitions for supply.

137. The licensee shall implement a multi-tier system that enables customers to seek alternative redressal mechanism and advance their supply and billing-related complaints to a higher authority within the organization if they find the initial response unsatisfactory.

Geographical Information System (GIS) Based Mapping of Distribution Infrastructure and Consumer Connections

138. The licensee shall implement geographical information system (GIS) for mapping, geo-referencing, and visualization of distribution assets and consumer connections to enhance operational efficiency, improve planning, and streamline work management practices.

139. The adoption of GIS or GPS-based information systems shall be carried out in phases to progressively map key distribution infrastructure and all consumers, ensuring their indexation with reference to the distribution network.

CHAPTER 5
EMBEDDED GENERATION

Objective

140. The objective of this section is to set out the technical compliances to be met by an embedded generator.

Connection Agreement

141. Licensee must ensure that its distribution system has adequate capacity of receiving supply of electricity from an embedded generator connected to its distribution system.

142. The embedded generator shall enter into a connection agreement with the licensee on the terms and conditions of scheduling, dispatch, connection and disconnection as stipulated by the licensee.

Supply Frequency

143. An embedded generator must ensure that its generating units are capable of continuous uninterrupted operation at the system frequency of 50 Hz and variations in accordance with the provisions in the Grid Code Regulation 2024.

Coordination and Compliance of Embedded Generators

144. An embedded generator must ensure that its generating units, and any equipment related thereto or installed therein, that is connected to a distribution system complies with this regulation and is maintained in a safe condition.

145. An embedded generator must ensure that protection equipment is effectively coordinated with the electrical characteristics of the distribution system and reactive power compensation shall be in compliance with Grid Code Regulation 2024 and reflected in the connection agreement if the generating units are synchronised with the transmission system.

146. An embedded generator must have:
    (1) An excitation control system including voltage regulator;
    (2) A governor system responsive to system frequency changes;

(3) Safe shutdown arrangement without affecting external electricity supply;
(4) Appropriate restart arrangement following loss of external electricity supply;
(5) Response to disturbances; and
(6) Appropriate nameplate with its rating and features.

Negative Sequence Voltage

147. An embedded generator must ensure that its unit's contribution to the negative sequence voltage at the point of connection between the embedded generator and the distribution system is less than 1%.

Fault levels

148. Licensee shall ensure that the fault level contributed by the embedded generator shall not exceed the short circuit rating and withstand capabilities of the connected equipment of distribution system.

CHAPTER 6
GUARANTEED SERVICE LEVEL

Objective

149. The objective of this section is to specify the minimum guaranteed service level that are required to be provided by licensee. These service levels shall serve as guidelines for licensee to operate the distribution system for ensuring efficient, reliable, coordinated, and economical system of electricity distribution and supply. licensee shall endeavour to undertake measures in order to progressively provide enhanced guaranteed service level.

Requirement to Meet Service Levels

150. Licensees shall maintain the guaranteed service level as specified in this section provided that any time limits set out herein shall refer to the maximum time permitted for performing the activities to which they relate.

151. Any failure by licensee to maintain the guaranteed service level specified herein shall render the licensee liable to payment of compensation to a consumer claiming such compensation under the provisions of the Act.

Quality of Supply: Voltage Variations

152. Except with the written consent of the consumer or with prior sanction of the Authority, licensee shall not permit the voltage at the point of supply to vary from the declared voltage in accordance with section 68.

153. In case of complaint raised by consumer on voltage variation, licensee shall rectify the complaints with the time limits or otherwise pay the compensation in accordance with schedule I of this regulation.

Communication of Applicable Charges for Connection

154. Licensee on receiving an application for electricity connection shall communicate the applicable charges to be borne by the applicant, within the time limit mentioned in schedule I of this regulation, failing which compensation as outlined therein shall be payable by licensee to consumer.

Installation of Supply

155. Licensee on receiving an application for electricity connection shall give supply of electricity to such premises in accordance with the time limits to be met under different situations as mentioned in schedule I of this regulation, failing which compensation as outlined therein shall be payable by licensee to consumer.

Restoration of Supply

156. In case of supply disruptions, licensee shall restore power supply in urban and rural areas within the time limits mentioned in schedule I of this regulation, failing which compensation as outlined therein shall be payable by licensee to consumer.

157. The period of interruption as a result of any scheduled outage shall be specified in a public notice identifying the discreet blocks of affected loads, provided that such scheduled outage shall not normally exceed twelve (12) hours on any day.

Reconnection

158. Where licensee has disconnected supply to a consumer for a period of not more than six (6) months, and if such consumer subsequently pays all amounts due and payable to the satisfaction of the licensee or, in case of a dispute, pays such amounts under protest, the licensee shall reconnect supply within the time limits mentioned in schedule I of this regulation. Provided that where the period of disconnection exceeds six (6) months, an application for reconnection of supply shall, after either payment of amounts due or upon settlement of dispute, be treated as a fresh application for supply of electricity under the provisions of the Act.

159. Schedule I outlines the compensation to be paid by licensee to the consumer if the licensee fails to meet the time limits for supply reconnection as outlined therein for urban and rural consumers.

Consumer Bill Complaint

160. Licensee shall resolve the billing complaint regarding electricity bills within the time limits mentioned in schedule I of this regulation, failing which compensation as outlined therein shall be payable by licensee to consumer.

Consumer Charter

161. Where licensee makes an appointment with a customer, he shall keep this appointment in good faith and not fail to be present at the appointed place and time unless there is a valid reason, failure to keep such appointment shall render the licensee liable to pay compensation to consumer, as mentioned in schedule I.

162. Every authorised representative of the licensee shall visibly display his name tag and, if so, required by a consumer, produce for scrutiny, proof of identity and authorization of the licensee for the purpose of any interaction with a consumer.

163. Licensee shall maintain, in every specified division within the area of supply, at least one consumer service center which shall be open for not less than eight (8) hours a day, on all days of the week, for essential services to be provided to consumers and with a facility for collection of payments from consumers.

164. Besides this regulation, any other approved terms and conditions of supply along with the prevailing approved tariff schedule shall be made available on demand by licensee to any consumer on payment of reproduction charges, at any of the offices or consumer service centres of the licensee.

Other Services

165. An authorised representative of the licensee shall undertake reading of each consumer's meter in accordance with the time limits mentioned in schedule I of this regulation.

166. Any change of name or change of tariff category shall be effected by licensee in accordance with the time limits mentioned in schedule I of this regulation.

167. Where the consumer applies for closure of account with the licensee, the licensee shall, subject to satisfactory resolution of all amounts due from the consumer, repay all outstanding amounts due to the consumer in accordance with the time limits mentioned in schedule I of this regulation.

168. Schedule I outlines the compensation to be paid by licensee to the consumer if the licensee fails to meet the respective timelines outlined therein.

Contact Center Operation for Consumer Service

169. The response time to telephone calls and the call abandonment rate at the contact center shall comply with the threshold limits specified in schedule I of this regulation, failing which compensation as outlined therein shall be payable by licensee to consumer.

Reliability Indices

170. Licensee shall calculate the reliability of distribution system on the basis of number and duration of sustained interruptions in a year, using the following indices:
    (1) System average interruption frequency index (SAIFI);
    (2) System average interruption duration index (SAIDI);
    (3) Customer average interruption duration index (CAIDI);
    (4) Customer average interruption frequency index (CAIFI); and
    (5) Momentary average interruption frequency index (MAIFI).

171. Provided that while calculating the above indices, the following types of interruptions shall not be taken into account:
    (1) Scheduled outages;
    (2) Momentary outages of a duration of less than five minutes;
    (3) Outages due to failure of the grid;
    (4) Outages due to reasons described in section 178; and
    (5) Outages due to reasons described in section 30, section 31, section 32 and section 33.

172. Licensee shall calculate the reliability of distribution system for momentary interruptions of less than five (5) minutes, using momentary average interruption frequency index (MAIFI).

173. Licensee shall submit annual outage plan by end of the year for the activities to be carried out in following year and the actual outage plan executed in that year at the beginning of the next year.

174. Licensee shall calculate the reliability indices for each distribution zone:
    (1) Including all types of outages;
    (2) As per section 170 and section 172; and
    (3) For only planned or schedule outage.

175. Licensee shall maintain all types of power outages data for each distribution zone.

176. Licensee shall upload monthly information on reliability indices determined as per section 174 on its website and also submit the same to the Authority on quarterly basis.

177. The Authority shall fix standards of reliability to be achieved by the licensee and licensee shall comply with these standards which will be updated by the Authority periodically.

Exemptions

178. These guaranteed service levels shall not apply where, in the opinion of the Authority, licensee is prevented from meeting his obligations under this regulation because of adverse impacts produced by cyclones, earthquakes, floods, storms, war, riots, strikes, landslides, fires, or any other occurrences which are either beyond the control of the licensee, or for reasons not attributable to or caused by him. On the occurrence of such events, licensee shall notify the Authority in writing furnishing details as per section 179 and seek relaxation of its obligations to maintain the service standards during the period of such occurrence and covering the affected distribution zone. Licensee may also seek such exemption in the event the operations of the distribution system are adversely affected on the occurrence of an incident or serious safety incident restricting the licensee's capability to discharge its obligations under this regulation. Such relaxation shall not be excused from failure to maintain the guaranteed service level under this regulation in situations where such failure can be attributed to negligence or deficiency or lack of preventive maintenance of the distribution system or failure to take reasonable precaution on the part of the licensee.

179. Licensee may submit an application to the Authority for relaxation of the guaranteed service level, detailing:
    (1) The description of the interruption and reasons why the licensee considers it ought to be relaxed; and
    (2) Evidence of the impact of the interruption on the licensee's reliability performance or guaranteed service level.

180. The Authority may by general or special order, exempt the licensee from any or all of the guaranteed service level for such period and for such part of the distribution system as may be specified in the said order.

Determination of Compensation

181. Where licensee finds that it has failed to meet any of the guaranteed service level. specified under this regulation, either of its own knowledge, or upon written claim filed by an affected consumer, licensee shall be liable to pay such consumer and all other consumers similarly affected, such compensation as has been determined by the Authority and enumerated in schedule I of this regulation for each situation of service default or non-compliance by licensee.

182. If licensee fails to meet the standards specified in schedule I of this regulation, without prejudice to any penalty which may be imposed, he shall be liable to pay such compensation to the affected consumer(s).

183. The payment of such compensation shall be made by licensee within thirty (30) days of a direction issued by the Authority.

184. Failure by the licensee to pay the compensation in accordance with section 181 shall constitute a dispute, which shall be dealt with in accordance with the procedure set out in the Electricity Regulatory Authority Dispute Settlement Rules and Regulations 2025 as amended from time to time.

185. A customer seeking compensation for damages must submit a written claim to the licensee within six months from the date of the incident. The claim must be supported by a technical report providing evidence of the damage.

CHAPTER 7
RIGHTS AND OBLIGATIONS

Licensee's Obligations

186. Licensee shall develop and maintain an efficient, economical and a coordinated distribution system in its area of supply.

187. Licensee shall arrange to supply electricity on receipt of application from an applicant.

188. Licensee shall develop a standardised format of customer Charter, which shall be handed over to consumer at the time of connection to the distribution system. licensee shall also review and submit the charter to the Authority:
   (1) at least once every five (5) years; and
   (2) as and when requested.

189. Licensee's customer Charter must summarize all current rights, entitlements and obligations of licensees and consumers relating to the supply of electricity, including:
   (1) The identity of the licensee;
   (2) The licensee's guaranteed service level; and
   (3) Other aspects governing the relationship between licensee and consumers under this regulation and other relevant codes and regulations approved by the Authority.

190. Licensee shall notify consumers of the details of scheduled power outages and in case of unplanned outages or faults provide immediate intimation to consumers through SMS or by any other electronic mode along with estimated time for restoration.

191. Licensee shall also provide information on reliability and continuity of supply, including wherever applicable an explanation for any interruption of supply (whether planned or unplanned but excluding breakdowns) to all consumers either over telephone, via text messages or in writing and also through his website. If the consumer requests such information or explanation in writing, such request shall be complied with within twenty (20) days of the request. In the event of

any planned interruption of supply in the service area, licensee shall at least two (2) days in advance inform through local newspapers or though text message or email about the affected area, brief reasons for the interruptions, discreet blocks of loads to be interrupted and tentative duration.

192. If licensee is required to undertake specific tests as applicable on the request of the customer to determine the quality of supply, the licensee may levy charges for this service in accordance with its approved statement of charges.

193. If the results of the test under section 192 show that the licensee is not complying with his obligations under this regulation, licensee must take appropriate remedial action and the charges levied by it for carrying out the tests shall be refunded.

194. On request by a consumer, the licensee must provide the consumer or the consumer's licensed electrical contractor with reasonable information on licensee's requirements in relation to any proposed new electrical installation of the consumer or changes to the consumer's existing electrical installation, including appropriate advice about supply extensions, if required.

195. Licensee shall provide application tracking mechanism based on the unique registration number through web-based application or mobile app or through SMS or by any other mode.

196. Licensee shall provide access to various services such as application submission, monitoring status of application, payment of bills, status of complaints raised, etc. to consumers through multiple channels and through his area-wise designated offices.

197. Licensee shall publish the guaranteed service level along with compensation structure on its website or on the notice board at all its offices.

198. The procedure for registration of complaints by consumers shall be displayed by licensee on the notice board of its offices or publish on its website, along with the facilities available for receiving complaints and their resolution.

199. Licensee is obligated to acknowledge any consumer complaints and ensure that appropriate measures are taken for their resolution.

200. Licensee shall take adequate measures to create consumer awareness regarding the existing services provided and use of any new technology apparatus such as smart meters.

Licensee's Rights

201. Licensee shall charge a reasonable security deposit from the applicant who requires new connection for electricity supply.

202. Licensee shall charge from an applicant requiring supply of electricity any expenses to be reasonably incurred in providing any electric line or electrical equipment, or component thereof, used for the purpose of giving that supply.

203. Charges as applicable shall also be levied by licensee towards expenses to be reasonably incurred in alteration to or shifting of supply in a premises as may be requisitioned by consumers.

204. Licensee shall charge a penalty from the consumer, who has been found to be involved in unauthorized use of electricity and offences, in accordance with the Act.

Consumer's Obligations

205. A consumer must inform licensee as soon as practicable if there is any:
   (1) Proposed change to wiring or any equipment in the consumer's electrical installation which may affect the quality of the supply of electricity to any other person;
   (2) Change affecting access to the licensee's equipment located at the consumer's supply address;
   (3) Major change to the quantum of electricity likely to be used by the consumer at the consumer's supply address; and
   (4) The user on request from the licensee, shall provide details of loads connected or planned to be connected to the distribution system which are required for the purpose of the distribution system planning. The licensee shall assist the LV consumers to furnish the information required, such as:
      (a) The location or address of the consumer at which the loads are connected or proposed to be connected;

(b) Expected maximum demand in kVA or kW;

(c) Existing load in kWh and kVARh;

(d) Existing peak loads; and hourly load profile in kW or kWh;

(e) Anticipated new loads;

(f) Any proposed changes in load scheduling; and

(g) Annual planned outages programme.

Consumer's Rights

206. The consumer has the right to a minimum guaranteed service level to be maintained by licensee for supply of electricity.

207. A consumer having concerns related to supply of electricity to his premises (such as interruptions, voltage variations, delays in connection or reconnection services, etc, or being aggrieved by billing discrepancies or errors, incorrect meter readings, non-receipt of bills, disputes over charges, etc.,) has the right to approach the licensee and register his complaints.

208. Where licensee has failed to maintain the guaranteed service level specified in this regulation, the consumer is entitled to claim compensation as per the provisions of this regulation.

209. Where damage or loss is caused to the customer by the negligence of the licensee in the course of its operations, the customer has the right to payment of fair and adequate compensation by the licensee as will be determined by the Authority, in accordance with provisions of the Act.

210. Where licensee defaults in its obligation to provide a supply of electricity to a customer, the customer shall have the right to appeal to the Authority.

Confidentiality

211. Licensee shall ensure that any classified information obtained as a result of his activities shall not be revealed to anyone, except for persons who are authorised to receive such information. Licensee shall also ensure that such information is not used for conducting any other activities, other than the licensed activity except:

(1) With the prior written consent of the person or business entity to whose affairs the information relates;

(2) If the information is already known to the public;

(3) If the licensee is required or permitted to disclose the information to comply with the license conditions, under the order of the Authority or in terms of any effective legislation; and

(4) When the information is required to be disclosed in the normal course of performing licensed activity.

CHAPTER 8
SAFETY INCIDENT REPORTING

Introduction

212. This section covers the procedure of incident or serious safety incident reporting in the event of its occurrence in distribution system by any user to licensee and by licensee to user and to the Authority.

Incident and Serious Safety Incident Reporting

213. If any serious safety incident occurs in connection with the distribution system or supply or use of electricity in or in connection with, any part of the electric lines or electrical equipment of any person and the serious safety incident results or is likely to have resulted in loss of human or animal life or in any injury to a human being or an animal, the licensee shall give notice of the occurrence and of any such loss or injury actually caused by the serious safety incident to all concerned in such form and within such time as may be prescribed by the Authority.

214. The Authority may, if it thinks fit, by order appoint an electrical inspector to inquire and report:
    (1) As to the cause of any serious safety incident affecting the safety of the public, which may have been occasioned by or in connection with the distribution, supply, or use of electricity; or
    (2) As to the manner and extent to which the provisions of the Act or Rules and regulations made hereunder or of any licensee, so far as those provisions affecting the safety of any person, have been complied with.

215. Licensee, consumers, and agreed parties shall provide access to information and entry to the premises for investigating the serious safety incident by the Inspector appointed by the Authority.

Incident Reporting

216. Licensee shall send a preliminary report to the Authority of all the significant incidents in the licensee's area of supply, which result in an interruption to service or substantial damage, within one week of its occurrence, followed by a detailed report within one month.

217. Licensee and users shall establish a format and procedure for the exchange of information.

218. The users shall furnish information to licensee regarding any major incident occurring in their system promptly.

219. The major incidents that would affect the distribution and supply system are:
   (1) Major breakdowns in the distribution system having a supply interruption for more than 12 hours at a stretch;
   (2) Major breakdowns in lines or cables, or equipment; and
   (3) Any other incident which the licensee may consider worth reporting with regard to the safe and reliable operation of the distribution system.

Serious Safety Incident Reporting

220. All reportable incidents occurring in the lines and equipment of 33 kV and below substations shall be promptly reported orally by the licensee whose equipment has experienced the incident, to all other significantly affected users identified by the licensee as well as to the operating personnel of transmission function and the Authority. If the reporting incident is of significant nature, the written report shall be submitted to the Authority within two (2) hours duly followed by a comprehensive report within five (5) working days of the submission of the initial written report.

221. Operating personnel of transmission function may call for a serious safety incident reporting from and seek a report from licensee on any reportable serious safety incident affecting other users and particularly in the case of such user whose equipment might have been a source of the reportable serious safety incident. The format for such a report shall typically contain the following:
   (1) Location of the incident or serious safety incident;
   (2) Date and time of the incident or serious safety incident;
   (3) Equipment, or any component thereof involved;
   (4) Supplies interrupted and the duration wherever applicable;
   (5) Amount of generation loss, wherever applicable;
   (6) System parameters before and after the incident (voltage, frequency, load, generation, etc.,);
   (7) Network configuration before the outage due to an incident or a serious safety incident;

(8) Relay indications and performance of protection;

(9) Brief description of the incident or serious safety incident;

(10) Estimated time of return to service;

(11) Any other relevant information;

(12) Suggested remedial measures;

(13) Recommendations for future improvement; and

(14) Name and designation of the reporting person.

222. The serious safety incident reporting format submitted by the licensee report shall contain sufficient detail to describe the event to enable the recipient to assess the implications and risks arising out of the same. The recipient may ask for clarifications and additional information wherever necessary, and it is obligatory that the licensee and reporting users shall put their best efforts and provide all the necessary and reasonable information.

223. In case of a request by either party, the oral report shall be written down by the sender and dictated by way of a telephone or mobile message or sent by e-mail to the recipient. In case of an emergency, the report can be given only orally and followed by written confirmation**.**

CHAPTER 9
MISCELLANEOUS

Dispute Resolution

224. Any dispute between the licensee and users arising from the enforcement of the provision of this regulation shall be dealt in accordance to the Dispute Settlement Rules and Regulations 2025.

Non-compliance

225. The licensee and users shall comply with the provisions of this regulation. Any non-compliance shall lead to the imposition of fines, penalties, and sanctions by the Authority.

Cyber Security

226. The licensee and users connected to the distribution system must have cybersecurity measures for the protection and resilience of critical information infrastructure.

Electric Vehicle Supply Equipment

227. The licensee shall facilitate the safe and reliable integration of EV charging infrastructure into the distribution network while ensuring compliance with applicable codes and safety requirements.

Amendment

228. The Authority may amend this Distribution Code Regulation as and when required.

Definitions and Abbreviations

229. For the purpose of this regulation, any word or expression used to which a meaning has been assigned in the Electricity Act of Bhutan, 2001, shall have that meaning, unless explicitly indicated in this regulation. The following words and expressions shall have the meaning ascribed to them:

(1) "**Act**" means the Electricity Act of Bhutan, 2001;

(2) "**Apparatus**" means any and all of the electrical plant and equipment and will comprise all machines, fittings, structures, accessories, and appliances, including meters, which use electricity for functioning;

(3) "**Application**" means an application complete in all respects in the appropriate format, as required by licensee, along with documents showing payment of necessary charges and other compliances;

(4) "**Applicant**" means any person or entity who files an application form with licensee for supply of electricity, increase or decrease in sanctioned load or contract demand, transfer or change in name, change in title or mutation of premises or property where supply is provided, change in consumer category, disconnection or restoration of supply, or termination of agreement, shifting of connection or any other services as the case may be, in accordance with the provisions of the Act, and rules and regulations made thereunder;

(5) "**Area of Supply**" means the area within which licensee is authorised by the license to supply electricity;

(6) "**Authorised Representative**" refers to all officers, staff or representatives of licensee, discharging functions under the general or specific authority of the licensee;

(7) "**Average Power Factor**" means the power factor measured based on the average over a period and to be calculated as a ratio of kilowatt hour and kilovolt-ampere hour during the same period;

(8) "**Circuit**" means an arrangement of conductor(s) for the purpose of carrying electrical energy and forming a system or branched system;

(9) "**Complaint**" means any grievance made by a consumer with regard to supply and billing of electricity by the licensee, provided that, grievance falling within the purview of tampering with or unauthorised use of supply, and recovery of charges initiated or penalties imposed as a consequence is excluded;

(10) "**Conductor**" means any wire, cable, bar, tube, rail or plate used for conducting energy and electrically connected to the distribution system;

(11) "**Connection Point**" means a point at which a user's electrical system is connected to the licensee's distribution system;

(12) "**Consumer or Customer**" means any person who is supplied with electricity for his own use by the licensee or by any other person engaged in the business of supplying electricity to public under

the Act or any other law for the time being in force and includes any person whose premises are for the time being connected with the distribution system of the licensee for the purpose of receiving supply of electricity;

(13) "**Customer Average Interruption Duration Index**" or "**CAIDI**" means the average interruption duration of sustained interruptions determined in accordance with section 170 for those consumers who experienced interruptions during the reporting period, determined by dividing the sum of all sustained consumer interruption durations, in minutes, by the total number of interrupted consumers for the reporting period, or by using the following equation:

CAIDI = ∑ Total Customer Interruption Durations / Total Number of Customer Interruptions

CAIDI = (Σ Ri x Ni) / (Σ Ni) = SAIDI / SAIFI

Where:

"Ri" is the restoration time for interruption event "i";

"Ni" is the number of consumers who experienced a sustained interruption in interruption event "i" during the reporting period;

(14) "**Customer Average Interruption Frequency Index**" or "**CAIFI**" means the average interruption frequency of the sustained interruptions determined in accordance with section 170 for those consumers who experienced interruptions during the reporting period, determined by dividing the total number of all consumer interruptions by the total number of consumers interrupted for the reporting period, or by using the following equation:

CAIFI = ∑ Total Number of Customer Interruptions/ Total Number of Customers Interrupted;

(15) "**Day**" means a working day, other than a Saturday or Sunday, or a public holiday;

(16) "**Disconnection**" means the physical separation or remote disconnection of a consumer from the distribution system of the licensee;

(17) "**Distribute**" means to distribute electricity to customer's point of supply using a distribution system;

(18) "**Distribution system**" means any system consisting mainly of cable, service lines and overhead lines, electrical plant and meters having design voltage of 33 kV and below owned or operated by a licensee for distribution or for retail supply and used for the transportation of electricity from a transmission system or generating sets or other points to the point of delivery to consumers, and includes any electrical plant and meters owned or operated by the licensee in connection with the distribution of electricity. The distribution system shall not include any part of a transmission system, except where used for the supply of electricity to a single consumer or group of consumers;

(19) "**Distributed Energy Resource System (DERs)**" means the grid interactive power generation and storage solutions originating from renewable energy sources including the power system installed on consumer or prosumer premises and connected to the distribution system of the licensee;

(20) "**Distribution Zone**" means electrical distribution system where electricity is distributed from substations to consumers through localised medium and low voltage networks;

(21) "**Earthing**" means connection of the electrical equipment with the general mass of earth as to ensure at all times an immediate discharge of energy to earth without risk to life and property in the event of a fault or short circuit in the electrical system;

(22) "**Electricity Regulatory Authority (ERA)**" or "**Authority**" means the authority of that name established pursuant to part 2 of the Act;

(23) "**Embedded Generator**" means a generator which is embedded within and connected to a distribution system;

(24) "**Emergency**" means a situation due to the actual or imminent occurrence of an unforeseeable event or incident which either disrupts or has the potential to disrupt supply of electricity to consumers, or endangers or threatens to endanger the safety or health of any person, or destroys or damages, or threatens to destroy or damage, any property;

(25) "**Flicker**" means the impression of unsteadiness of visual sensation induced by a light stimulus whose luminance or spectral distribution fluctuates with time;

(26) "**Generation Licensee**" means a person who has obtained a license for generation of electricity pursuant to part 3 (section 22) of the Act;

(27) "**Grid Code Regulation 2024**" means a document describing the approach and the responsibilities for planning and operation of power system issued by the Authority in pursuant to section 89 of the Act;

(28) "**Harmonic**" means the sinusoidal component of a periodic wave either voltage or current waveform having a frequency that is an integer multiple of the fundamental frequency of 50 Hz;

(29) "**High Voltage Consumer**" means any consumer who is directly connected to the transmission system at 66 kV;

(30) "**International Standard**" means a globally recognized set of technical guidelines, specifications, or best practices established by international standardization bodies such as the International Electrotechnical Commission (IEC), Institute of Electrical and Electronics Engineers (IEEE), International Organization for Standardization (ISO), and others;

(31) "**License**" means a license issued under the provisions of part 3 of the Electricity Act of Bhutan 2001;

(32) "**Licensee**" means any person issued with a license under the provisions of part 3 of the Act, and in terms of this regulation, shall signify transmission and distribution licensee who has obtained a license to distribute electricity pursuant to section 11 of the Act;

(33) "**Load Shedding**" means deliberate switching off of electrical loads at distribution level based on system requirement;

(34) "**Low Voltage"** means voltage not exceeding 400 Volts between phase to phase for three phase supply or 230 volts between phase to neutral in case of single-phase supply;

(35) "**Medium Voltage**" means voltages of 6.6 kV, 11 kV and 33 kV;

(36) "**Meter**" means a set of integrating instruments used to measure and/or record and store the information regarding amount of electrical

energy supplied or the quantity of electrical energy contained in the supply, in a given time, which includes whole current meter and metering equipment, such as current transformer, capacitor voltage transformer or potential or voltage transformer with necessary wiring and accessories including for communication and also includes pre-payment meters, special energy meters, etc.;

(37) "**Momentary Average Interruption Frequency Index**" or "**MAIFI**" means the average frequency of momentary interruptions per consumer occurring during the reporting period and leading to outage duration of less than 5 minutes, and is determined by dividing the sum of all number of consumers momentary interruption by the total number of consumers using the following equation:

$MAIFI = \sum i\ Mi \times Ni / NT$

Where:

"Mi" is the number of momentary interruption events "i"

"Ni" is the number of consumers who experienced a momentary interruption in an interruption event "i" during the reporting period; and

"NT" is the total number of consumers of the licensee;

(38) "**Power Factor**" means the ratio of active power (kW) to apparent power (kVA) and is expressed as the cosine of the electrical angle between the voltage and current vectors in an AC electrical circuit;

(39) "**Planned or Schedule Outages**" means annual outage plan taken up for operational and maintenance work for upkeep of the distribution system that requires supply to the electrical system to be interrupted;

(40) "**Prosumer**" means an electricity consumer that produces part of electricity needs from DERs installed in his premises and uses the distribution system to inject surplus production for sale and to withdraw electricity from the same distribution system when self-production is not sufficient to meet own needs; being connected to and having the electrical interface with distribution system. prosumers are also users within the meaning of this Distribution

Code Regulation and governed by the applicable provisions;

(41) "**Prosumer Agreement**" means an agreement between a prosumer and the licensee for connection to distribution system providing terms and conditions for sale and purchase of power to and from the distribution system;

(42) "**Premises**" means land, building or infrastructure or part or combination thereof in respect of which a separate meter or metering arrangements have been made by licensee for the supply of electricity;

(43) "**Rural Area**" means any area that is not an urban area;

(44) "**Serious Safety incident**" means an incident arising from the design, construction, operation or maintenance of an electric power plant or equipment that:

(a) Results in the death of any person;

(b) Results in an injury to any person which results in disability; and

(c) Causes damage to property other than property belonging to a licensee;

(45) "**System Average Interruption Duration Index**" or "**SAIDI**" means the average duration of sustained consumer interruptions (determined in accordance with section 170 per consumer occurring during the reporting period, determined by dividing the sum of all sustained consumer interruption durations, in minutes, by the total number of consumers using the following equation:

$$SAIDI = \sum(Ri * Ni) / NT$$

where:

"Ri" is the restoration time for interruption event "i";

"Ni" is the number of consumers who experienced a sustained event "i" during the reporting period; and

"NT" is the total number of consumers of the licensee.

(46) "**System Average Interruption Frequency Index**" or "**SAIFI**" means the average frequency of sustained interruptions determined in accordance with section 170 per consumer occurring during the

reporting period, determined by dividing the total number of all sustained consumer interrupted by the total number of consumers using the following equation:

SAIFI= Ni / NT

Where:

"Ni" is the number of consumers who experienced a sustained interruption in interruption event "i" during the reporting period; and

"NT" is the total number of consumers of the licensee;

(47) "**System Operator**" means the authorised person (s) whose function is defined under section 39 of the Act;

(48) "**Temporary Power Supply**" means an electricity supply required by a person or an entity for meeting the temporary needs of power supply for construction purposes, fairs, exhibitions, musical concerts, congregations, temporary sheds, labour camps, fuel stations, municipal worker camps, transit camps, emergency shelters, etc.;

(49) "**Transmission System**" means an electricity network operating at a nominal voltage of 66 kV and above or as deemed by the Authority to be a part of the transmission network;

(50) "**Unplanned Interruptions**" means the loss of electrical power to one or more customer that does not result from planned outage;

(51) "**Urban Area**" means any area within a proclaimed municipality;

(52) "**User**" means any person or entity having an electrical connection to the distribution system and shall imply to include generation licensee, embedded generators, consumers, and prosumers; and

(53) "**Voltage**" means the difference of electric potential measured in volts between any two conductors or between any part of either conductor and the earth;

Words or expressions used in this regulation but not defined herein shall have the meanings assigned to them in the Act or rules or regulations framed thereunder.

230. Abbreviations

The following abbreviations shall have the meaning ascribed to them:

(1) "**AC**" means alternating current;

(2) "**ERA**" means Electricity Regulatory Authority;

(3) "**CAIDI**" means customer average interruption duration index;

(4) "**CAIFI**" means customer average interruption frequency index;

(5) "**CT**" means current transformer;

(6) "**DERs**" means distributed energy resource system;

(7) "**DFR**" means demand forecasting report;

(8) "**DPR"** means distribution performance report;

(9) "**EV**" means electric vehicle;

(10) "**HP**" means horse power; "HV" means high voltage;

(11) "**kW**" means kilowatt;

(12) "**kWh**" means kilowatt hour;

(13) "**kVAR**" means kilovolt ampere reactive;

(14) "**kVARh**" means kilovolt ampere reactive hour;

(15) "**kV**" means kilovolt;

(16) "**kVA**" means kilovolt ampere;

(17) "**LV**" means low voltage;

(18) "**MAIFI**" means momentary average interruption frequency index;

(19) "**MV**" means medium voltage;

(20) "**PT**" means potential transformer;

(21) "**SAIDI**" means system average interruption duration index; and

(22) "**SAIFI**" means system average interruption frequency index.

Schedule 1: Compensation for Failure to Meet Guaranteed Service Level for LV and MV Consumers

a. Quality of Supply: Voltage Variations

Situation	Standard	Compensation Rates
Time taken to rectify voltage complaint without need for any network reinforcement (voltage variation outside the limit)	2 days for urban areas and 4 days for rural areas	Nu. 470 shall be paid to each affected customer per 24 hours of the default
Time taken to correct voltage complaint which requires network reinforcement after completion of detail assessment	3 months for urban areas and 6 months for rural areas	

b. Communication of Applicable Charge for Connection

Situation	Communication of Charges (Within the Period) for Urban Areas	Communication of Charges (Within the Period) for rural areas	Compensation Rates
Where supply can be provided by extending the service cable from existing distribution networks	1 day from the date of receipt of complete application	2 days from the date of receipt of complete application	Nu. 470 shall be paid to each affected customer per 24 hours of the default
Where supply requires extension of LV distribution system			
Where supply requires installation of distribution transformer, purchased, and delivered by customer at his cost	3 days from the date of receipt of complete application	5 days from the date of receipt of complete application	
Where supply requires extension of MV distribution system including the arrangement and installation of transformer by BPC at the cost of customer	7 days from the date of receipt of complete application	10 days from the date of receipt of complete application	

c. Installation of Supply

<table>
<tr><th>Situation</th><th>Installation of Supply (Within the Period) Urban Areas</th><th>Installation of Supply (Within the Period) rural areas</th><th>Compensation Rates</th></tr>
<tr><td>Where supply can be provided by extending the service cable from existing distribution networks</td><td>2 days from the date of receipt of complete application</td><td>3 days from the date of receipt of complete application</td><td rowspan="3">Nu. 50 per kW per 24 hours of sanctioned load shall be paid to each affected customer after default</td></tr>
<tr><td>Where supply requires extension of LV distribution system</td><td>2 weeks from the date of receipt of complete application</td><td>3 weeks from the date of receipt of complete application</td></tr>
<tr><td>Where supply requires installation of distribution transformer purchased and delivered by customer at his cost</td><td colspan="2">Within 1 month from the date of receipt of complete application and delivery of transformer at the work site</td></tr>
<tr><td>where supply requires extension of MV distribution system including the arrangement and installation of transformer by BPC at the cost of customer</td><td>4 months from the date of receipt of complete application</td><td>6 months from the date of receipt of complete application</td><td>1% of the amount deposited as capacity reserve charge by the customers per 24 hours of default</td></tr>
</table>

d. Restoration of Supply

Situation	Urban Areas	Rural Areas	Compensation Rates
In the case of burnt meters	3 hours upon receipt of complaint	a) 8 hours upon receipt of complaint where there is road access b) 48 hours upon receipt of complaint where there is no road access	a) For LV customers: Nu. 5 per kW per hour of sanctioned load after default
In the case of normal fuse-off calls	2 hours upon receipt of complaint	a) 6 hours upon receipt of complaint where there is road access. b) 8 hours upon receipt of complaint where there is no road access	
In the case of distribution overhead line breakdowns	24 hours upon receipt of complaint	a) 36 hours upon receipt of complaint here there is road access b) 72 hours upon receipt of complaint where there is no road access	b) For MV customers: 1% of average monthly bill amount of last 3 months for every 24 hours of default
In the case of distribution transformer failure	24 hours upon receipt of complaint	a) 36 hours upon receipt of complaint here there is road access b) 72 hours upon receipt of complaint where there is no road access	
In the case of underground cable failure	24 hours upon receipt of complaint	a) 48 hours upon receipt of complaint where there is road access b) 72 hours upon receipt of complaint where there is no road access	

e. Reconnection

Situation	Standard	Compensation Rates
Disconnected supply	After payment of dues, reconnect the supply immediately for urban consumers	Nu. 470 shall be paid to each affected customer per 24 hours of the default or on pro rata basis
	Within 24 hours from payment of dues for rural consumers	

f. Consumer Bill Complaint

Situation	Standard	Compensation Rates
If no additioal information is required	Within 3 working days of receipt of complaint	Nu. 470 shall be paid to each affected customer per 24 hours of the default
If additional information is required	Within 7 working days of receipt of complaint	

g. Customer Charter

Situation	Standard	Compensation Rates
Keeping of appointment with customer	Date and time for the appointment	Nu. 50 for each instance of default

h. Other Services

Situation	Standards	Compensation Rates
Reading of customer's meter	Monthly	Nu. 300 per month
Change of name or tariff category	Second billing cycle	Nu. 100 per month or part thereof
Closure of account after payment of dues	1 day for urban areas and 2 days for rural areas	Nu. 100 per month or part thereof

i. Contact Center Operation Service Standards

Category	Customer Service Measure	Standard	Penalty
customer Service	Time to respond to telephone calls	95% within 30 seconds	As per Penalty Rules and regulation 2024
	Call abandoned rate	Should not be more than 10%	

Schedule 2: Compensation for Failure to Meet Guaranteed Service Level for HV Consumers

a. Quality of Supply: Voltage Variation

(1) On receipt of a voltage fluctuation complaint, licensee shall verify if the voltage fluctuation is exceeding the limits specified and upon confirmation, licensee shall rectify the complaints in accordance with the time limits mentioned in table below.

(2) HV consumers failing to install capacitors of adequate capacity shall not be eligible for the compensation.

(3) HV consumers shall maintain minimum power factor of 0.9.

Situation	Standard	Compensation Rates
Time taken to rectify voltage complaint without need for any network reinforcement (voltage variation outside the limit)	1 day	a) 12 hrs - 24 hrs: Nu. 500 shall be paid to each affected customer per hours of the default b) 24 hours and beyond: Nu.1000 shall be paid to each affected customer per hours of the default
Time taken to correct voltage complaint which requires network reinforcement after completion of detail assessment	3 months	

b. Communication of Applicable Charge for Connection

Situation	Communication of Charges	Compensation Rates
Where supply requires an extension of HV transmission system including installation of transformer by BPC at the cost of customer	30 days from the date of receipt of complete application	Nu. 470 shall be paid to each affected customer per 24 hours of the default

c. Installation of Supply

Situation	Installation of Supply	Compensation Rates
Where supply requires an extension of HV transmission system including installation of Transformer	12 months from the date of receipt of complete application	1% of the amount deposited as capacity reserve charge by the customers per 24 hours of default

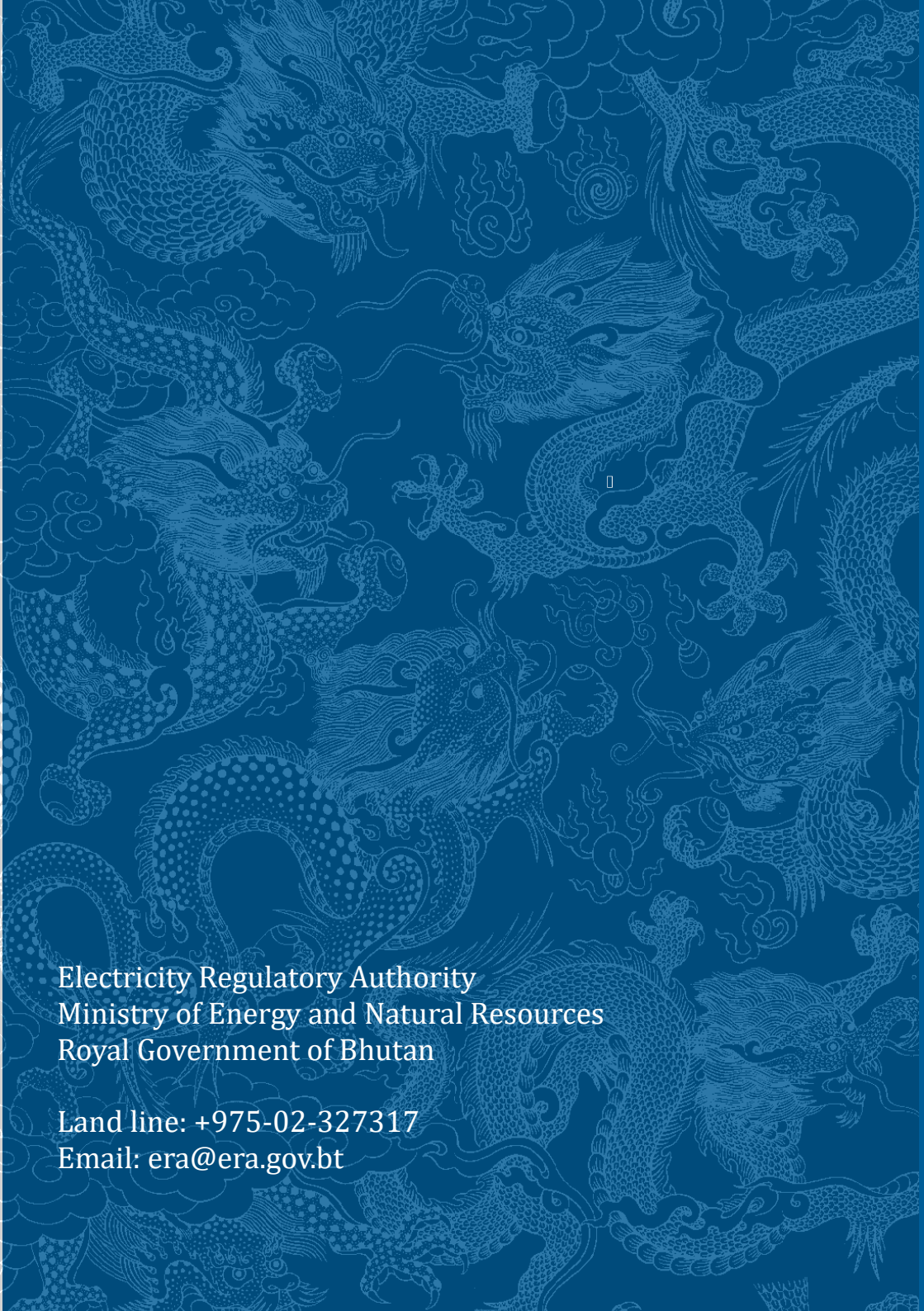
d. Restoration of Supply

Situation	Urban Areas	Rural Areas	Compensation Rates
In the case of line breakdowns	24 hours upon receipt of complaint	a) 36 hours upon receipt of complaint where there is road access b) 72 hours upon receipt of complaint where there is no road access	1% of average monthly bill amount of last 3 months for every 24 hours of default
In the case of transformer failures	24 hours upon receipt of complaint	a) 36 hours upon receipt of complaint where there is road access b) 72 hours upon receipt of complaint where there is no road access	
In the case of underground cable failure	24 hours upon receipt of complaint	a) 48 hours upon receipt of complaint where there is road access b) 72 hours upon receipt of complaint where there is no road access	

e. Consumer Bill Complaint

Situation	Standard	Compensation Rates
If no additional information is required	Within 3 working days of receipt of complaint	Nu. 470 shall be paid to each affected customer per 24 hours of the default
If additional information is required	Within 7 working days of receipt of complaint	

The amended version approved in the Hundred Twenty Eighth Commission Meeting held on 21st April 2025.



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