

ELECTRICITY SUPPLY AND DISTRIBUTION (STANDARDS OF PERFORMANCE, TECHNICAL AND OPERATIONAL) RULES.....

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In exercise of the powers conferred on the Energy Commission by section 28 of the Energy Commission Act and acting in consultation with the Public Utilities Regulatory Commission under section 27 of the Energy Commission Act, 1997 (Act 541), these Rules are made this day of

Purpose and Application

Purpose

1. The purpose of these rules is to provide for
 - i. the establishment of the standards of performance
 - ii. the technical and operational rules of practice.
 for public utilities licenced by the Commission to distribute and sell electricity to ensure the efficient, economic and safe supply and use of electricity.

Application

2. These Rules apply to public utilities licenced by the Commission to distribute or sell electricity Suppliers licensed by the Commission and customers of electricity utilities.

Electricity Supply Safety

Safety of supply

3. (1) A Supplier shall
 - (a) take reasonable steps to ensure that the design, construction, commissioning, operation, maintenance, and decommissioning of its distribution network or any part of its network is safe
 - (b) take the precautions necessary to avoid exposing the Customer or the public to live conductors or exposed electricity cables
 - (c) take all reasonable steps necessary to remotely or by any other means detect and protect lives and property from faults, failures, dangers, or unsafe conditions within its distribution system.

- (2) The Supplier shall appropriately place notices to warn the public of any potential or actual danger in subrule (1) paragraph (a) and (b).

- (2) Where a Supplier becomes aware, either by being informed by the public or otherwise, that its distribution system at a locality is unsafe and may pose a danger to the public, the Supplier shall

respond to the unsafe condition in accordance with benchmarks established in the Distribution Code or determined periodically by the Commission in consultation with the PURC.

- (4) Where there is any difference between the benchmarks established in the distribution code and that determined periodically by the Commission in consultation with the PURC, the latter shall prevail.
- (5) The Supplier shall correct the unsafe condition and restore supply where necessary in accordance with rule 14.

Safety Management Systems

- 4. (1) The Supplier shall have a safety management system in place:
 - (a) that is in accordance with the distribution code and the distribution licence issued by the Commission, and
 - (b) without limiting paragraph (a), the Supplier shall provide for the following matters:
 - i. protect the public from dangers arising from the distribution, sale, or use of electricity;
 - ii. advise the public about the hazards associated with electricity in relation to the distribution network;
 - iii. eliminate or reduce the risks of personal injury to any person or damage to property of any person;
 - iv. report on all related significant incidents and accidents to the Commission and the PURC in a format approved by the Commission;
 - v. reduce bush fire risks relating to electricity lines and other assets of the distribution utility's network; and
 - vi. always ensure that its distribution network is free from vegetation and obstructions.

- (2) A Supplier shall
 - (a) nominate, in consultation with the Commission, an external auditor to conduct audits of its safety management system every five years;
 - (b) submit written reports of the audit in paragraph (a) to the Commission; and
 - (c) publish and maintain copies of the report in paragraph (a) on the Supplier's website.

- (3) Despite subrule (2), the Supplier shall, upon commencement of these Rules,
 - (a) establish a safety management system within six months;

- (b) submit the first safety management audit report within twelve months after the establishment of the safety management system; and
- (c) implement recommendations of the report in paragraph (b) within twelve (12) months after submission of the report.

Protection Systems and Precaution against atmospheric electricity

5. (1) Pursuant to rule 4 subrule (1) paragraph (c), the Supplier shall install protection systems that are designed and maintained

- (a) to detect electrical fault(s) within a specific zone of the electrical network and to isolate only the relevant sections of the network with minimum disturbance to the rest of the network; and
- (b) to ensure safety and minimum interruptions to customers.

(2) A Customer shall install and maintain a protection system at the Customer's premises that meet approved standards for electricity protection devices and are compatible with the existing distribution system protection.

(3) A Customer using electricity from any installation shall provide such means for preventing any damage to the installation by atmospheric electricity.

Precaution in the execution of works

6. (1) The Supplier shall ensure that all work in respect of the supply of electricity which affects any:

- (a) water bodies, irrigation system, forest, drainage, or water supply system;
- (b) road works, railway, mine;
- (c) telecommunication equipment, aviation or harbour works;
- (d) other public or private works,

be carried out in the manner prescribed by these Rules and relevant regulations and without posing a danger to life and property.

(2) The Supplier shall liaise with the relevant persons to install and execute the works in subrule (1).

Connection of Supply

7. (1) A Supplier shall

- (a) ensure the provision of open, fair, and non-discriminatory access and connection to the distribution network for all qualified applicants

- (b) provide, install, and maintain the necessary equipment required for the distribution or sale of electricity to customers in a safe and reliable manner; and
 - (c) provide service connection(s) and protective device(s) for such connections in accordance with the approved standards as set out in the distribution code.
- (2) A person may apply to the Supplier to construct a part of the distribution network.
 - (3) Where an application made under subrule (2) is approved, the applicant shall finance the construction of the part of the distribution network in accordance with approved standards established by the distribution utility for the purposes of supplying electricity to the applicant's facility.
 - (4) Despite subrule (2) above, the Supplier shall have the exclusive right to operate and maintain the distribution network within its operational area as licensed by the Commission.
 - (5) Where with the approval of the Supplier, the applicant finances the construction of the distribution system, the Supplier shall refund sixty percent of the investment to the applicant when the Supplier subsequently connects other customers to the newly developed part of the network.
 - (6) Despite subrule (5), the Supplier shall submit in writing to the PURC for approval, procedures for making the refund.
 - (7) Where the applicant has paid all relevant charges for connection of supply of electricity in accordance with procedures established by the PURC, that Supplier shall provide the connection in accordance with established benchmarks in the distribution code or determined periodically by the Commission in consultation with the PURC.
 - (8) Where there is any difference between the benchmarks established in the distribution code and that determined periodically by the Commission in consultation with the PURC, the latter shall prevail.
 - (9) Where the Supplier fails to comply with subrule (8), the Customer may lodge a complaint to the PURC for redress.

Responsibility of the Customer

- 8. (1) A Customer shall
 - (a) ensure that the Customer's electrical installation is undertaken by a certified electrician or an electrical contractor registered with the Energy Commission in accordance with relevant rules and regulations, and is safe for connection of electricity supply;
 - (b) permit reasonable access at reasonable times, and adequate security for the Supplier's agent during meter reading, fault rectification, disconnection and reconnection exercises, and other lawful activities connected with the supply at the Customer's premises;

- (c) keep vegetation and obstructions at the Customer's premises clear from the Supplier's distribution systems with approval and supervision of the Supplier; and
- (d) be responsible for all associated charges in the case of reconnection, damages, actions, and inactions of the Customer.

(2) A Customer shall not

- (a) use electricity in a manner that would make the Supplier's distribution network unsafe;
- (b) use any electrical equipment or appliance that will cause damage to or degrade the quality of electricity supply to other customers on the Supplier's system;
- (c) interfere or intentionally cause damage or knowingly allow damage to be caused to the Supplier's distribution system, meter, or any equipment that is used for the supply of electricity to the Customer;
- (d) act in a manner that seeks to restrict the Supplier access to the meter.
- (e) connect supply that does not pass through a meter.
- (f) tamper with a meter or any ancillary equipment associated with the supply; and
- (g) use or permit to be used the electricity supplied to the applicant's premises:
 - i. for a customer class other than that for which it was contracted, or
 - ii. further distribution and sale to non-contracted persons

(3) Where it is established that any of the breaches in subrule (2) have resulted in damage to the Supplier's or a third party's property, the person(s) in breach shall be liable for the cost of repairs or replacement of the damaged property.

(4) A Customer shall not exceed the load specified in the Customer's application to the Supplier without the consent of the Supplier.

Power to disconnect or connect supply

9. (1) Where a Customer or an applicant for a new connection fails to comply with any of the provisions of rule 8, the Supplier may
- (a) in the case of a customer already connected to the distribution system, disconnect electricity supply to the Customer; or
 - (b) in the case of an applicant for a new connection, refuse to connect the applicant to the distribution system.

(2) Despite subrule (1), the Supplier shall reconnect supply to the Customer in accordance with rule 14 when the Customer complies with rule 8, and the Customer shall be responsible for all associated charges in reconnecting supply.

Reliability of Electricity Supply

Adequacy and stability of supply

10. (1) The Supplier shall take reasonable steps to ensure that it has in place arrangements to procure and supply adequate and stable electricity to all of its customers without discrimination.
- (2) The Supplier shall procure relevant ancillary services in order to ensure an efficient, secure, reliable, safe, and cost-effective operation of the distribution system
- (3) Where a Supplier seeks to procure additional electricity supply to meet additional demand, the procurement process shall be competitive and in accordance with provisions for bulk power and ancillary services procurement guidelines approved by the Commission in consultation with the PURC.

Interruption of supply

11. (1) A Supplier may disconnect or interrupt electricity supply to a locality or a customer for the purposes of carrying out maintenance, including repair and installation of new equipment.
- (2) An interruption of supply to a customer shall not be treated as a breach of these regulations where:
- (a) the interruption was a result of a major fault or damage to indispensable equipment in the electricity Supplier's distribution network subject to subrule (3).
 - (b) the interruption was as a result of a failure of, fault or damage to either the transmission system to which the electricity Supplier's distribution system was connected or a generating station connected to that transmission system; or
 - (c) the interruption was a result of a failure of, fault, or damage to a generating the station connected to the Supplier's distribution system;
 - (d) the interruption was a result of a natural disaster
- (3) Where a major outage was due to the negligence of the Supplier, paragraph (a) of subrule (2) shall not apply.

Duration and frequency of interruption of supply

12. (1) A Supplier shall ensure that the duration and frequency of electricity interruptions to a customer's premises within an operational year shall be in accordance with the distribution code or benchmarks established periodically by the Commission in consultation with the PURC
- (2) Where there is any difference between the benchmarks established in the distribution Code and that determined periodically by the Commission in consultation with the PURC, the latter shall prevail.
- (3) For the purposes of subrule (1), the frequency and period of interruption shall be consistent and commence from the time the Supplier is initially informed by:
- (a) a customer that the supply to the Customer's premises has been interrupted; or
 - (b) a person other than the Customer or is otherwise made aware by the operation of any automatic system operated by the Supplier in circumstances in which the supply to the Customer's premises has been interrupted or may reasonably be expected to have been interrupted.
- (4) A Supplier shall, subject to these Rules, pay into the Energy Fund the sum prescribed in Schedule I where that Supplier is in breach of the supply interruption limits specified in subrules (1) (2) and (3) in accordance with section 41 of the Act.
- (5) The Supplier shall notify Customers using appropriate communication media, the Commission, and the PURC of intended planned maintenance.

Emergency interruption of supply or disconnection

13. (1) A Supplier may, in an emergency, disconnect or interrupt the supply to a customer without notice to the Customer.
- (2) The Supplier shall act appropriately to rectify the situation and immediately advise the Customer.

Rectification of faults and restoration of electricity supply

14. (1) Where a Supplier is aware or informed of an interruption in the Customer's supply due to a fault, or damage to the Supplier's distribution system, the Supplier shall restore supply to the Customer's premises in accordance with the distribution code or benchmarks established periodically by the Commission in consultation with the PURC

- (2) Where the electricity supply to a customer's premises is interrupted by a natural disaster, transmission, or generation challenge, the Supplier shall restore the supply in subrule (1) after the situation returns to normalcy.
- (3) Where the interruption is to carry out planned or routine maintenance, subrule (1) shall not apply.

Electricity tariff setting and reviews

15. Where a supplier is due for or requests a tariff review, benchmarks established by the Commission shall be used as technical performance indicator by the PURC

Electricity Supply Quality

Supply frequency

16. (1) The nominal frequency of supply shall be 50 Hz and shall not go
- (a) beyond the Upper limit of 50+5%Hz; or
 - (b) below the lower limit of 50-5%Hz.
- (2) The Supplier is not liable for any frequency variations outside the frequency specified in subrule (1).

System voltage

17. (1) The Supplier shall ensure that the voltage at the point of supply to a customer's premises or electrical installation is within plus or minus ten (± 10) per cent of the following voltage levels:
- (a) 230 Volts;
 - (b) 400 Volts;
 - (c) 11 Kilovolts;
 - (d) 11.5 Kilovolts;
 - (e) 33 Kilovolts; or
 - (f) 34.5 Kilovolts.
- (2) Where a Supplier receives a supply voltage complaint from a customer, the Supplier shall respond and restore supply as in rule 14 subrule (1)
- (3) Despite subrule (2), where the Customer requests an explanation of the cause of the problem and measures taken, the Supplier shall, within twenty-four hours after rectification and restoration, respond to the Customer's request.

- (4) Any variations from the relevant standard voltage levels under subrule (1) shall be as provided in Schedule II to these Rules.

Voltage fluctuations

18. (1) A Supplier shall
- (a) ensure voltage fluctuations on its distribution system are in accordance with standards established in the Distribution Code, and
 - (b) not connect customers whose loads are likely to cause voltage fluctuations at the point of common coupling.
- (2) Where voltage fluctuations are traced to a customer, the Supplier may advise the offending Customer on the appropriate solution to the problem and may, after giving reasonable notice in writing, disconnect the offending Customer's connection at the point of common coupling.
- (3) The Supplier shall minimise the occurrence of voltage fluctuations, which shall not exceed the limits in the steady-state in Schedule II.
- (4) The Supplier shall reconnect the Customer in subrule (2) after the Customer has addressed the reason for the voltage fluctuations.
- (5) The Supplier in compliance with rule 188 subrule (1) shall ensure the occurrence of the transient voltage fluctuations does not exceed the limits in Schedule II.

Power factor

19. (1) A Supplier shall advise an industrial customer on the appropriate steps to be taken to ensure that the Customer's load power factor is within the relevant range set out in Schedule III.
- (2) The Supplier shall impose a power factor surcharge to be determined by the PURC if the Customer fails to install appropriate devices or technology to improve the power factor to at least 0.9 lagging.
- (3) Revenues accrued from the power factor surcharge shall be deposited into an Energy Demand Management Fund and shall be applied exclusively for energy conservation programmes.
- (4) Pursuant to subrule (1), the Customer shall, within a maximum period of six (6) months, install appropriate devices or technology on the Customer's electrical system to improve the power factor and minimise line losses.
- (5) Where the Customer fails to comply with subrule (4), the Supplier may disconnect electricity supply to the Customer's load.

- (6) Despite subrules (1) and (4), the Supplier shall install appropriate devices or technology in the distribution system as may be necessary to improve the power factor in an area.

Harmonics control

20. (1) A Supplier shall ensure that the voltage and current harmonic distortions at the point of common coupling nearest to a customer's point of supply shall be in accordance with the distribution codes.
- (2) A Customer categorised as a bulk or industrial Customer shall ensure that the voltage and current harmonic distortions in the Customer's electrical system are within limits stated in the distribution code.
- (3) Where it is apparent to the Supplier that a customer's voltage and current harmonic distortions exceed the limits specified in the distribution code, the Supplier may disconnect electricity supply to the Customer.
- (4) The Supplier shall restore supply to the Customer in subrule (3) when the Supplier is satisfied that the cause of the distortions have been remedied
- (5) A Customer practising net metering should ensure that the voltage and current harmonic distortions in the Customer's electrical system are within limits stated in the distribution Code
- (6) where there is sufficient evidence that the Customer has failed to comply with subrule (5) the Supplier shall isolate the net metering system

Negative sequence voltage

21. (1) A Supplier shall ensure that the negative sequence voltage at the point of common coupling to a customer's three-phase system is in compliance with codes, standards, and benchmarks established periodically by the Commission in consultation with the PURC.
- (2) A Supplier shall disconnect supply to a Customer without notice when the Customer fails to comply with subrule (1).

Load balance

22. (1) A Supplier, in supplying electricity to customers, shall ensure that
- (a) the connections are made to balance the loads on the three phases of the distribution network; and
 - (b) the load on every section of the distribution network shall, at all times, not exceed 70% of the network capacity using all available options of load management.

(2) A Customer shall ensure that the current in each phase of the Customer's three-phase system is in accordance with provisions in the distribution code and does not deviate from the average of the three-phase currents by more than

- (a) 5% for a standard nominal voltage up to 1kV; or
- (b) 2% for a standard nominal voltage above 1kV.

(3) Despite subrule (2), deviations of

- (a) 10% for a standard nominal voltage up to 1kV, or
- (b) 4% for standard nominal voltage above 1kV,

for periods of less than two minutes are permissible.

Metering

[Installation of a meter](#)

23. (1) The Supplier shall

- (a) provide, install and maintain a meter that will measure and record the amount of electricity supplied to the Customer within specified accuracy limits of that meter's class;
- (b) affix the meter in subrule (1) paragraph (a) at an appropriate location, and position it in such a way as to allow for easy access;
- (c) ensure that the meter meets standards established in the Metering Code;
- (d) ensure that the accuracy of the meter is maintained throughout its usage and in accordance with the applicable codes or standards;
- (e) test if necessary, calibrate all meters in accordance with the manufacturer's specifications;
- (f) seal any meter installed at the Customer's premises in the presence of the Customer or the Customer's representative, who shall ensure that the seal is not broken;
- (g) replace the meter or provide an appropriate alternative to restore electricity supply to the Customer where the meter becomes defective;
- (h) replace the meter in paragraph (g) at the cost to the Customer, where it is established that the Customer caused the defect or damage.

(2) Despite subrule (1) paragraph (f), a Supplier may break a seal on a meter during testing, maintenance, or repair and shall, upon completion, reseal the meter in the presence of the Customer or the Customer's representative.

(3) A customer shall

- i not tamper with,
- ii break the seal, or
- iii change the location of a meter.

(4) Where a Customer applies for a separate meter, the Supplier shall assess the Customer's load and provide a meter of the appropriate capacity.

Meter Audit

24. (1) A Supplier shall each year undertake an audit of meters that have been in operation for twenty years or more and replace at least 75% of the meters each year.

(2) A supplier who does not comply with these requirements under these Rules shall be considered to be in breach of a mandatory technical performance indicator requirement for the Public Utilities Regulatory Commission's electricity tariff review.

Meter Complaint

25. (1) The Supplier shall visit a customer's premises within twenty-four hours after receipt of a meter complaint from that Customer in respect of the following matters

- (a) that the meter on the Customer's premises is or may have been operating outside the permitted margins of error; or
- (b) that an event has occurred, or circumstances exist which the Supplier may reasonably expect to have been the cause of a meter operating beyond its margins of error; and for that reason, the Supplier shall investigate the complaint.

(2) A Supplier shall, after establishing a defect in the operation of a Customer's meter, repair or replace, where necessary, the Customer's defective meter within forty-eight hours.

(3) A Supplier who contravenes subrules (1) and (2) shall pay to the Customer the sum prescribed in the Schedule.

Load Management

Load shedding

26. (1) A Supplier shall shed load where

- (a) demand is likely to exceed supply as a result of a forced outage of a generating unit;
- (b) it is necessary to
 - i. preserve the reliability and security of the transmission and distribution system;
 - ii. to reinforce or rehabilitate the distribution network; or

iii. for safety reasons.

- (2) Where the Supplier decides to shed load under subrule (1), except in emergency situations, the Supplier shall immediately notify the Commission and the PURC of the intended load shedding either by
- (a) telephone, or
 - (b) electronic mail followed by a notice in writing.
- (3) The Supplier, in addition to notifying the Commission and the PURC under subrule (2), shall by a notice carried in the newspapers and on radio or television or social media platforms or any other communication media inform the public of any intended load shedding and the duration of it.

Installation of alternative source

27. (1) Where a Customer requires an alternative source of electricity for own use,
- (a) it shall be undertaken in accordance with approved standards as set out in the distribution code, and
 - (b) it must comply with rules 3, 15, and 16 to ensure electricity supply safety and electricity supply quality.
- (2) A Customer who installs any alternative source of electricity in any premises connected to the distribution network shall
- (a) provide an appropriate switching device that isolates the Supplier's system from that of the alternative electricity source at all times.
 - (b) in the case of a grid-tied system, provide an appropriate switching device that will facilitate the safe import and export of electricity from the grid-tied system
 - (c) paragraph (a) and (b) above shall be undertaken in accordance with applicable codes and standards.
 - (d) The Customer is liable for any damage arising from the Customer's non-compliance with subrule (2) paragraph (a) or (b) or from any defects in the Customer's alternative source of the electricity system.

Illegal Connections

28. (1) Any person who is found to be in breach of rule 8 subrule 2 paragraph (c) (e) and (f) shall be deemed to be engaged in illegal connection-
- (2) A Supplier shall disconnect supply to a Customer without notice,

- (a) where the distribution system, meter, or any equipment that is used for the supply of electricity to the Customer is found tampered with or damaged.
 - (b) where the Customer illegally connects the service or allows the service to be used in a manner that interferes with the supply of the service to others; or
 - (c) the Customer uses a service that was legally connected in an unauthorised manner
- (3) A person may report to the Supplier anyone who engages in the illegal use of the supply or use of the service in a manner which interferes with the supply of the service to others;
- (4) A Supplier shall be entitled to recover a minimum of twelve months and a maximum of twenty-four months of the energy consumed illegally at the prevailing rates at the time of committing the offense.

Reporting

Reporting Standards

29. (1) A Supplier shall prepare and submit to the Commission separate technical and financial reports as per licence issued and shall contain proper records of the performance of the Supplier over the relevant period.
- (2) Where a Supplier fails to submit the reports in subrule (1), the Supplier shall pay to the Commission the sum prescribed in Schedule I.

Provision of information

30. A Supplier shall, on request, provide a customer with information about the services provided to the Customer's premises, including the following
- (a) load profiles and power factors, where applicable;
 - (b) meter readings for the recent forty-eight months' electricity supply to the Customer's premises.

Offences and penalties

Offences and penalties

31. (1) If at any time the Commission has reasonable grounds that the Supplier
- (a) contravenes any obligation imposed under these Rules; or
 - (b) fails to maintain quality of electricity supply standards to the customers in accordance with these Rules, with the exception of natural disaster; or
 - (c) defaults in complying with any directives given by the Commission under the Act; or
 - (d) breaches the terms and conditions of the licence

the Commission may impose an administrative charge on the Supplier as in Schedule I.

- (2) Despite rule 27 subrule (4) A person who,
- (a) in the case of an illegal connection, or
 - (b) intentionally tampers, interferes, or knowingly allows tampering or interference with the Supplier's installation or equipment
- commits an offence and is liable on summary conviction to a fine not exceeding 2,000 penalty units and in default, liable to a term of imprisonment not exceeding two (2) years, including payment of compensation for any damage resulting from the breach
- (3) where an offence under these Rules is committed by a person which is a body corporate, a member of a partnership or other firm, every director or officer of that body corporate or member of that partnership or any person concerned with the management of the body corporate, partnership or firm shall be deemed to be also guilty of the offence and is on summary conviction liable to pay a fine of in accordance with the Act in addition to payment of compensation for any damage resulting from the breach to the satisfaction of the court
- (4) A person shall not be convicted of an offence by virtue of subrule (2) if it is proved that
- (a) Due diligence was exercised to secure compliance with the provisions of these Rules, and
 - (b) The offence was committed without the person's knowledge, consent, or connivance.

Interpretation

32. In these Rules, unless the context otherwise requires,

“alternate source” means any other energy source other than the grid supply.

“approved electricity tariff” means tariff approved and gazetted by PURC.

“atmospheric electricity” means electricity produced by natural phenomena such as static electricity or lightning

“certified electrician” means a person certified by the Commission to undertake electrical wiring in Ghana in accordance with Electrical Wiring Regulations, 2011, LI 2008.

“Customer” means a person that contracts to purchase electricity from a Supplier.

“distribution system” means a system consisting of a network of electric feeders, transformers, service lines meters, and other distribution switchgear.

“distribution code” means the National Electricity Distribution Code, which sets out the conditions that Suppliers must meet in carrying out their obligations to distribute or retail electricity under their licence.

“electric feeder” means an overhead conductor or underground cable used for bulk electricity supply.

“emergency” means an unforeseen occurrence of a situation such that the supply of electricity threatens to endanger a person, public safety or cause damage to property such as, but not limited to, fire outbreak, flooding, etc in a location.

“industrial customer” means a special load tariff customer whose maximum demand is above 100kVA.

“incident” means an occurrence, condition, or situation arising in the course of work that resulted in or could have resulted in injuries, illnesses, damage to health, or fatalities.

“major fault” means a fault that requires of high capital cost to fix or remedy such as a substation blast, cable blasts, damaged transformer, damaged switchgear, burnt HV pole, failure of SCADA system.

“metering code” means the National Electricity Metering Code which, sets out the minimum acceptable parameters for metering systems for licensed electricity distribution utilities and electricity sale and retail utilities.

“natural disaster” means a natural occurrence, such as a fire, flood, earthquake, windstorm, or other events, which threatens the public peace, health, and safety of the people or which damages and destroys public and private property.

“net metering” means a methodology under which electrical energy generated by a Customer-generator and delivered to the distribution facilities as measured by an appropriate device to offset electric energy supply by the Distribution Utility to the Customer-generator during the applicable billing period.

“obstructions” means any objects or installations that seek to hinder free access to the distribution system.

“PURC” means the Public Utilities Regulatory Commission.

“point of common coupling” means supply connections made to more than one Customer from the same phase of a low voltage distribution system.

“reinforce-” means the process of providing additional circuits to strengthen an existing electrical circuit of equipment.

“Supplier” means an entity that has been licensed by the Energy Commission under the Act as an electricity distributor or retailer of electricity.

“transient voltage” means a temporary unwanted voltage in an electrical circuit that ranges from a few volts to several thousand volts and lasts microseconds up to a few milliseconds.

Revocation

33. The following legislative instruments are revoked:

- (a) Electricity Supply and Distribution (Technical and Operational) Rules, 2005 (L.1. 1816); and
- (b) Electricity Supply and Distribution (Standard of Performance) Rules, 2008 (LI. 1935).

Schedule I

**Any such payments to be paid into the Energy Fund

REFERENCE RULES	DESCRIPTION	*Maximum CHARGE GHS
3.	Safety of Supply	As approved by EC's Board
4.	Safety Management systems	
5.	Protection Systems and Precaution against atmospheric electricity	
7.	Connection of Supply	
11.	Interruption of supply	
14.	Rectification of faults and restoration of electricity supply	
17.	System Voltage	
18.	Voltage fluctuations	
20.	Harmonics control	As approved by EC's Board
21.	Negative sequence voltage	
22.	Load balance	
23.	Installation of a meter	
24.	Meter Audit	
25.	Meter Complaint	
26.	Load Shedding	
29.	Reporting standard	

*Schedule II***STANDARD NOMINAL VOLTAGE**

Voltage Level in kV	Voltage Range for Time Period		
	Steady state	Transient State	
		Less than 1 minute	Less than 10 seconds
<1.0	±10%	±15%	Phase to Earth +50% -100% Phase to Phase +20%-100%
11	±10%	±15%	Phase to Earth +80% -100% Phase to Phase +20%-100%
33	±10%	±15%	Phase to Earth +80% -100% Phase to Phase +20%-100%
34.5	±10%	±15%	Phase to Earth +80% -100% Phase to Phase +20%-100%

*Schedule III***POWER FACTOR LIMITS**

Supply Voltage	Power Factor Range for Customers Maximum Demand and Voltage					
	Up to 100Kva		Between 100kVA -2MVA		Over 2MVA	
	Minimum		Maximum		Minimum	
	Lagging	Leading	Lagging	Leading	Lagging	Leading
<1.0	0.95	0.95	-	-	-	-
11	0.95	0.95	0.95	0.95	0.96	0.96
33	0.95	0.95	0.95	0.95	0.96	0.96
34.5	0.95	0.95	0.95	0.95	0.96	0.96