

ELECTRICITY (INSPECTION) ACT

CHAPTER 54:72

Act

44 of 1945

Amended by

32 of 1950

172/1961

8/1962

136/1976

Current Authorised Pages

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**Note on Rules 25(2); 27(4); 30(3); 31(2); 32(3); and 34(3) of
the Electricity Inspection Rules**

The Factories Ordinance has been repealed by the Occupational Safety and Health Act, 2004 (Act No. 1 of 2004) which at the date of the revision of this Act was not proclaimed.

CHAPTER 54:72

ELECTRICITY (INSPECTION) ACT

ARRANGEMENT OF SECTIONS

SECTION

1. Short title.
 2. Interpretation.
 3. Appointment of Electrical Inspectors.
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 10. Entry on premises.
 11. Serious accidents to be reported. Investigation and inquiry.
 12. Questions for decision of Chief Inspector, subject to appeal to Minister.
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 14. Prosecution of offences.
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 16. Exemptions from provisions of Act.
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CHAPTER 54:72

ELECTRICITY (INSPECTION) ACT

1950 Ed.
Ch. 30 No. 16.
44 of 1945.

An Act to provide for the inspection of electrical installations, plant, apparatus and works and for other purposes in connection therewith.

Commencement.

[1ST JANUARY 1946]

Short title.

1. This Act may be cited as the Electricity (Inspection) Act.

Interpretation.

2. In this Act—

“apparatus” means electrical apparatus and includes all apparatus, machines, consuming devices and fittings in which conductors are used or of which they form a part;

“authorised person” means a person appointed by the licensee, the management or the owner of an installation, or by a contractor, for the time being, to a licensee or owner to carry out certain duties incidental to the generation, transformation, distribution and use of energy, provided that the person is competent for the purpose for which he is employed, the burden of proof of competency being on the employer;

“Chief Inspector”, “Deputy Chief Inspector” and “Inspector” mean, respectively, the Chief Electrical Inspector, Deputy Chief Electrical Inspector, and an Electrical Inspector appointed under section 3;

“conductor” means an electrical conductor arranged to be electrically connected to a system;

“consumer” means a person who is supplied with energy or whose premises are for the time being connected for the purposes of a supply of energy with any system of public supply;

“danger” means danger to health or to human life or limb from shock, burn or other injury resulting from the generation, transformation, distribution or use of energy and includes danger to property from fire resulting as aforesaid;

“electric supply line” means a wire or conductor or other means for conveying, transmitting or distributing energy, together with any casing, coating, covering, tube, pipe or insulator enclosing, surrounding or supporting the same or any part thereof, or any apparatus connected therewith for the purpose of conveying, transmitting or distributing energy;

“energy” means electrical energy when generated, transmitted, supplied or used for any purpose except the transmission of a message;

“generator” means a dynamo of any type for the generation of energy;

“installation” means the whole of any particular plant, apparatus or works designed for the supply or use, or both, as the case may be, of electrical energy, under one ownership and, where management is prescribed, in charge of the same management, including prime movers, if any, with all necessary plant and buildings in connection therewith, electric supply lines and consuming apparatus, if any;

“licence” means a licence issued under the Trinidad and Tobago Electricity Commission Act, permitting the licensee to operate or work an installation; Ch. 54:70.

“licensee” means a person permitted by licence to work or operate an installation and includes an authorised agent;

“management” means the authorised person for the time being placed in charge of an installation by the licensee or owner or by a contractor;

“motor” means a motor of any type for the transformation of electrical energy into mechanical energy;

“pressure” means the difference of electrical potential between any two conductors or between a conductor and the earth, as read by a standard voltmeter;

“prime mover” means a machine supplying power to a generator for the purpose of generating energy;

“private safety” means the obviation of danger to individuals or to private property;

“public safety” means the obviation of danger to the general public, to public property and to roads, streets, railways, canals, docks, wharves, piers, bridges, waterworks and their appurtenances and telegraphic, telephonic and other electrical signalling lines;

“system” means an electrical system in which all the conductors and apparatus are electrically connected;

“transformation” includes the transformation of pressure up or down and the conversion of alternating to direct current or *vice versa* by static, rotary or electro-chemical means.

Appointment
of Electrical
Inspectors.

3. (1) There shall be in the public service a Chief Electrical Inspector, a Deputy Chief Electrical Inspector and such number of Electrical Inspectors as may be required to inspect installations and electrical plant, apparatus and works and to perform such other duties as may be prescribed.

(2) The carrying out of the said inspections and the performance of the said duties shall be under the administrative control of the Chief Electrical Inspector.

(3) The name of every person appointed to the public service in pursuance of subsection (1) shall be notified in the *Gazette*.

Inspection of
installation on
completion.

4. On the completion of a new installation, the owner thereof shall give notice in writing to the Chief Inspector, who shall cause inspection and tests to be made within the prescribed period and, if the installation satisfies the requirements of this Act and the rules made hereunder, certify or cause to be certified accordingly in the prescribed form. No installation shall be operated until such certificate has been obtained.

Periodical
inspections of
installations.

5. In addition to periodical inspections during construction and final inspections on completion, all installations while in operation shall be inspected at such intervals as may be prescribed. The licensee and management and persons in charge of all installations shall afford full facilities for inspection within reasonable working hours.

6. Except as may be otherwise provided by any exemption under section 16, all installations which have been operated or the construction of which has been completed or begun before the commencement of this Act shall be subject to this Act and the rules made hereunder.

Installations completed or begun before commencement of Act.

7. Any department of the Government or any other consumer taking or using energy from an installation shall, if the Chief Inspector so requires, provide such means for obviating risk of damage to the installation by atmospheric electricity as may be directed by the Chief Inspector.

Precautions against atmospheric electricity.

8. (1) No person shall in the generation, transmission, supply or use of energy permit any part of his electric supply lines to be connected with earth except as may be required by rules made under this Act or by any other law or may be expressly permitted by the Chief Inspector.

Restriction of connection with earth.

(2) In the event of any breach of subsection (1), the Chief Inspector may by written order require the licensee or owner to break the connection and may prohibit the use of any electric supply line or works or of any installation until the order is complied with, and every such order shall be complied with by the person concerned.

(3) Any licensee or owner who fails to comply with the written order of the Chief Inspector as mentioned above, or who continues to use the electric supply line or works or any installation prohibited to be used while the order remains uncomplied with, is liable to a fine of seven hundred and fifty dollars and, if the contravention continues, to a further fine of seventy-five dollars for every day in respect of which it so continues after the first day.

9. (1) In the event of an Inspector finding in any installation or apparatus any defect which in his opinion is likely to cause danger, he may, by notice in writing posted at the place where the installation or apparatus to which it relates is installed or working or served upon the licensee or owner thereof, suspend the operation and use of the installation or apparatus until the defect is made

Procedure in case of dangerous defect in installation or apparatus.

good or removed, and in such case the installation or apparatus shall not be operated or used so long as the notice of suspension remains unrevoked.

(2) Any person who operates or uses an installation or apparatus while any such notice of suspension remains unrevoked is liable to a fine of seven hundred and fifty dollars, and if the contravention continues to a further fine of seventy-five dollars for every day in respect of which it so continues after the first day.

(3) Any licensee and every management and person in charge of an installation who, on becoming aware of a defect therein which is likely to cause danger, and every consumer who on becoming aware of a defect in any apparatus which is likely to cause danger, fails to make an immediate report thereof to an Inspector shall be liable to a fine of three hundred dollars.

(4) If in the opinion of the Chief Inspector any defect in an installation in respect whereof a licence is in force is of such a nature that it cannot be made good or removed, he shall forward a report of his findings to the Minister who may cancel the licence.

Entry on premises.

10. (1) Every Inspector is empowered to enter upon any premises, in or upon which an installation or apparatus may be, at any time between the hours of 6.00 a.m. and 6.00 p.m. and also at any other time when any installation or apparatus in or upon the premises may be at work.

(2) Any person who obstructs any Inspector in the execution of his duty under subsection (1) is liable to a fine of three hundred dollars, and on a second or subsequent conviction to a fine of seven hundred and fifty dollars and imprisonment for three months.

Serious accidents to be reported. Investigation and inquiry. [172/1961 136/1976].

11. (1) Where any accident causing or resulting in loss of life or grievous hurt to any person or serious damage to property has occurred in connection with any installation or electrical plant or apparatus, the owner or licensee thereof and the management thereof shall with the least possible delay report in writing to an Inspector the facts of the matter so far as they are known to them

respectively, and the Inspector shall thereupon visit the place where the accident occurred and make a preliminary investigation of the circumstances and record in writing his finding upon the investigation, and if there has been any loss of life or there is reason to believe that any person has been fatally injured, shall send a copy of his findings to the nearest Magistrate.

(2) In the event of loss of life or grievous hurt to any person due to any accident in connection with any installation or electric plant or apparatus, no alterations or additions shall without the consent of an Inspector be made to any part of the installation, plant or apparatus which may have contributed to cause the accident, nor shall any alterations be made without such consent to the site of the accident until an Inspector has completed his investigation; but nothing herein contained shall operate to interfere with rescue work or work necessary for the general safety of life or property.

(3) Any person who fails to make any such report as is required by subsection (1), or effects any alterations or additions to any part of an installation, plant or apparatus in contravention of subsection (2) is liable to a fine of seven hundred and fifty dollars.

(4) If upon a preliminary investigation it appears to the officer making the investigation that there is reason to believe that the accident was due to any failure to comply with the provisions of this Act or of the rules made hereunder or to neglect of any lawful order given by an Inspector, or if the officer making the investigation as mentioned above is satisfied that the accident might have been prevented if proper precautions had been taken and observed in the working of any installation or electrical plant or apparatus, such persons of electrical or other special skill and experience as shall be appointed by the Minister shall hold an inquiry into the nature and cause of the accident and shall forward to the Minister a copy of the evidence taken at the inquiry together with their findings thereon and such further report as may seem to them necessary, and if they are of opinion that criminal proceedings ought to be instituted against any person in connection with the accident, they shall forward to the Director of Public Prosecutions a copy of the evidence, finding and report.

(5) The foregoing provisions of this section shall not apply in respect of any factory or other premises or place to which the Factories Ordinance applies.

Ch. 30 No. 2.
(1950 Ed.).

Questions for
decision of
Chief Inspector,
subject to appeal
to Minister.

12. (1) In the event of any difference of opinion between a licensee and an Inspector or between the management or owner of any installation or apparatus and an Inspector regarding any structural question or question of fitting or adjustment in relation to any installation or apparatus, the matter shall be referred to and decided by the Chief Inspector.

(2) From any decision of the Chief Inspector an appeal shall lie to the Minister. However, no such appeal shall, except by special permission of the Minister, be admitted after the expiration of forty-two days from the date when the decision appealed against was given. In dealing with any such appeal the Minister, after inquiry has been made into the subject matter thereof in the manner provided in subsection (3) and after such further investigation if any as he thinks fit to make, may set aside or vary the decision of the Chief Inspector or may uphold the same, and the decision of the Minister shall be final and shall be carried into effect.

(3) The subject matter of any such appeal shall be referred by the Minister to a Board consisting of such persons of electrical or other special skill and experience as the Minister shall appoint for the purposes of inquiry. The Board, at the conclusion of the inquiry, shall forward the evidence, if any, recorded by them together with their opinion and recommendations as to the decision proper to be given in the matter of the appeal, and any of such persons who may dissent from the opinion or recommendations given may forward to the Minister a statement in writing of the reasons for his dissent.

(4) Every person who sits as a member of the Board of Inquiry referred to in subsection (3) shall be entitled to be paid out of moneys provided by Parliament.

Powers of Board
of Inquiry.

13. For the purpose of holding inquiries under this Act a Board of Inquiry shall have power to administer oaths and shall be vested with the powers of a Magistrate for compelling the attendance of

witnesses, maintaining order and otherwise duly conducting the said inquiries. Persons summoned to attend at any such inquiry shall be legally bound to attend.

14. All offences against, and all penalties imposed by, this Act or any Rules made hereunder shall be prosecuted and recovered in the manner provided by the Summary Courts Act.

Prosecution
of offences.

Ch. 4:20.

15. The Minister may make Rules prescribing—

Rules.

- (a) the duties under this Act of any officers appointed under section 3;
- (b) the intervals, times and manner in which any installations or apparatus shall be inspected, the notice (if any) to be given in relation to inspections and the preparations to be made by the licensees and the management for the inspections;
- (c) the design, construction, protection and maintenance of installations and apparatus, the conditions under which any installation or apparatus shall be worked or operated and the prohibition of the use of dangerous apparatus;
- (d) the means which may be employed (to the exclusion of other means) for the generation, transmission, transformation, distribution and application of energy;
- (e) the manner in which energy shall be measured and in which it is permitted to be, or is prohibited from being supplied or used;
- (f) the standards to be adopted for measurement of dimensions of installations and apparatus;
- (g) the regulation and variation of the nature, pressure and periodicity of the energy supplied;
- (h) the class or design, or classes or designs, of wires, fittings and apparatus to be used by consumers and the manner in which they shall be fixed, arranged, protected and controlled and providing for the erection, inspection, testing and maintenance thereof;

- (i) the fees to be paid for the inspection of installations and apparatus, the form and contents of and the conditions to be implied in licences, the form and duration of certificates and the suspension, extension and revocation of licences and certificates;
- (j) the measures to be taken and the fittings to be supplied and used in connection with installations in order to secure public safety and private safety;
- (k) the manner of effecting alterations to installations in operation;
- (l) the precautions to be taken on the relief of persons in control of apparatus and the manner of notifying to Inspectors the names and qualifications of persons placed in charge of installations and in control of the operation of apparatus;
- (m) the manner of calculating the power of generators and motors;
- (n) the manner of holding inquiries under this Act;
- (o) the forms of notices and the manner of service thereof;
- (p) the means to be adopted, whether by prohibition or otherwise, to prevent or abate any nuisance likely to arise or arising from the working of any installation or apparatus;
- (q) the records to be kept in respect of installations, licences, inspections and any other matters to which this Act relates and the form thereof and the persons by whom the same are to be kept;
- (r) the time, place and manner for the payment of moneys payable under this Act or the Rules made hereunder and the mode of collection and disposal thereof;
- (s) offences against any of such Rules and penalties therefor not exceeding seven hundred and fifty

dollars and in the case of a continuing offence, a further penalty not exceeding seventy-five dollars for each day during which the offence continues;

- (t) any other matters as to which it may appear to the Minister expedient to make Rules for the better carrying out of the provisions of this Act.

16. The Minister may by Notification exempt from all or any of the provisions of this Act—

Exemptions
from provisions
of Act.

- (a) any installation, or part thereof, constructed before the commencement of this Act;
- (b) any other particular class of installation or apparatus,

and may by similar Notification cancel any exemption so notified.

SUBSIDIARY LEGISLATION

ELECTRICITY (INSPECTION) RULES

ARRANGEMENT OF RULES

RULE

1. Citation.
2. Interpretation.
3. Compliance with standards.
4. Discretion of Chief Inspector.
5. Non-compliance with Rules.
6. Certificate.
7. Inspection and issue of certificate.
8. Offence.
9. Duties of Electrical Inspector.
10. Fees.

FIRST SCHEDULE.

SECOND SCHEDULE.

ELECTRICITY (INSPECTION) RULES

made under section 15

308/1947.
[131/1948
166/1950
92/1980
219/1980
137/1984
4/1985
6 of 1989].

1. These Rules may be cited as the Electricity (Inspection) Rules. Citation.

2. In these Rules, “public supply” means the supply of electrical energy by any local authority, company or person, authorised by law to distribute and sell electrical energy to any other person. Interpretation.

3. Every new installation and every extension or replacement of any existing installation shall comply with the standards fixed by the regulations for the electrical equipment of buildings issued by the Institution of Electrical Engineers of the United Kingdom and approved by the Electricity Commissioner of Great Britain which are in force on the date of the completion of the installation or extension or replacement. Compliance with standards.

4. In the event of its being impracticable to comply with the regulations prescribed in rule 3, it shall be in the discretion of the Chief Inspector to permit compliance with the standards laid down by the National Board of the Fire Underwriters commonly known as the National Code (American Standard) where materials of American and Canadian origin are used. Discretion of Chief Inspector.

5. Where the Chief Inspector is satisfied that extenuating circumstances exist during a period not exceeding five years after the coming into force of these Rules then non-compliance with rules 3 and 4 shall not be deemed to be an offence under these Rules. Non-compliance with Rules.

6. (1) No person shall operate any new installation or extension to or replacement of any existing installation connected to any public supply unless a certificate in the prescribed form in the First Schedule is obtained. Certificate.
First Schedule.

(2) In the case of an installation which is under the supervision of a qualified engineer, such prior inspection shall not be necessary unless the load to be connected to the installation exceeds ten per cent of the existing total connected load.

Inspection and
issue of
certificate.

7. Except as provided in rule 6(2), no person shall operate any electrical installation or extension to or replacement thereof connected after the coming into force of these Rules without having the same duly inspected and before the issue of the relevant certificate in respect thereof.

Offence.
[166/1950].

8. Any person who operates any installation in contravention of rule 6 or 7 is liable on summary conviction to a fine of five hundred dollars.

Duties of
Electrical
Inspector.

9. An Electrical Inspector shall carry out the following duties:

- (a) the annual inspection of the electrical installations and apparatus in all public buildings and public places of entertainment;
- (b) the inspection of electrical installations in all buildings and places whether public or private made after the passing of these Rules before energy is supplied thereto, for the purpose of determining whether the installations have been carried out to his satisfaction and in accordance with the requirements of rules made under the Act;
- (c) the inspection of electrical installations in all buildings whether public or private at the request of the Commissioner of Police or any insurance company concerned or the occupier or owner for the purpose of determining whether all such installations meet all proper requirements of safety from personal injury or fire or otherwise to his satisfaction and in accordance with the requirements of rules made under the Act;
- (d) the supervision of all electrical installations to be carried out in Government buildings and of the

rewiring of any repairs in connection with the same;

- (e) the inspection of the wiring and connections from the suppliers' mains to the consumers' meters for the purpose of determining whether the wiring and connections are capable of conveying to the consumers' meters the electric supply guaranteed by the suppliers and available at the mains with safety and without undue drop in voltage when all the lights and all the electrical appliances of the consumers' installations are in use, and the notification of both the supplier and the consumers if the wiring and connections are found to be incapable of so doing;
- (f) all the duties of an Electrical Inspector appointed under the Act and set out therein.

10. An Inspector may charge the fees set out in the Second Schedule in respect of the services mentioned therein.

Fees.
Second
Schedule.

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[Subsidiary] *Electricity (Inspection) Rules*

Rule 6(1).

FIRST SCHEDULE

No

INSPECTION CERTIFICATE OF APPROVAL

ELECTRICITY (INSPECTION) ACT

I certify that the whole/part of the Electrical Installation No., for....., at, details of which are given below has been inspected and tested on, 20....., and that to the best of my knowledge and belief the above Electrical Installation satisfies the requirements of section 4 of the Electricity (Inspection) Act, and the rules made thereunder. The whole/part of the Electrical Installation when tested with a constant pressure of Volts D.C. showed an insulation resistance of ohms between all unearthed conductors and the earth electrode, and between all conductors earthed and unearthed ohms. The effectiveness of the continuity taken between any earthed material of the above Electrical Installation and the earth electrode showed a resistance of ohms. The test was carried out with all switches and all lamps out/in.

The above Electrical Installation consists of—

.....

I recommend that this installation be periodically inspected and tested at intervals of not more than years and a report obtained on its condition.

.....
Chief Electrical Inspector

Electricity (Inspection)

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Electricity (Inspection) Rules

[Subsidiary]

SECOND SCHEDULE

(Rule 10)
[6 of 1989].

PART I

<i>Services</i>	<i>Inspection Fees Payable</i>	<i>\$</i>	<i>¢.</i>
<i>(a) Temporary Installations—</i>			
(i) Domestic ...	Single Phase or Three Phase	150.00	
(ii) Business or Industrial ...	Single Phase or Three Phase	300.00	
<i>(b) Permanent Installations—</i>			
(i) Service Mains ...	Single Phase ...	30.00	
	Three Phase		
	Up to 100 Amps ...	40.00	
	101 Amps to 200 Amps ...	50.00	
	201 Amps to 300 Amps ...	70.00	
	Over 300 Amps ...	70.00	
		and	
		\$ 30.00	
		for every	
		100 Amps	
		or part	
		thereof	
		over 300	
		Amps	
(ii) Feeders and Sub-feeders ...	Per Feeder or Sub-feeder ...	10.00	
(iii) Outlets ...	Each ...	3.00	
(iv) Switches ...	Each ...	3.00	
(v) Motors ...	Less than 1 horse power ...	10.00	
	1 to 5 horse power ...	20.00	
	Over 5 up to 10 horse power ...	30.00	
	Over 10 horse power ...	40.00	
		and	
		\$ 5.00	
		for each	
		horse	
		power	
		over 10	
		horse	
		power	

LAWS OF TRINIDAD AND TOBAGO

MINISTRY OF THE ATTORNEY GENERAL AND LEGAL AFFAIRS

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Electricity (Inspection)

[Subsidiary]

Electricity (Inspection) Rules

PART I—Continued

<i>Services</i>	<i>Inspection Fees Payable</i>	<i>\$</i>	<i>¢.</i>
(vi) Generators	... Up to 100 horse power	... 100.00	
	... Over 100 horse power	... 100.00	
			and \$ 5.00 for each horse power over 100 horse power
(vii) Business or Industrial Equipment other than Motors (e.g., Heaters, Welders, etc.)	... Each	... 50.00	
(viii) Domestic Equipment (e.g., Water Heaters)	... Each	... 10.00	
(c) Re-connection and Condition Inspection—			
(i) Domestic 100.00	
(ii) Business or Industrial	... Single Phase	... 150.00	
	... Three Phase		
	... Below 200 Amps	... 300.00	
	... Over 200 Amps	... 500.00	
(d) Inspection of Cables and Conduits to be covered or buried—			
(i) Domestic	... Per visit	... 40.00	
(ii) Business or Industrial	... Per visit	... 50.00	
(e) Re-inspection—			
(i) Domestic 60.00	
(ii) Business or Industrial	... Single Phase	... 100.00	
	... Three Phase		
	... Below 200 Amps	... 200.00	
	... Over 200 Amps	... 400.00	

UNOFFICIAL VERSION

UPDATED TO DECEMBER 31ST 2015

<i>Services</i>	PART II		<i>Inspection Fees Payable</i>	
			<i>Commissioning</i>	<i>Maintenance</i>
			\$ c.	\$ c.
High Voltage and other tests				
(i) For testing and inspection of High Voltage Cables ...	For 1st Circuit ...	1,000.00	800.00	
	For each additional Circuit ...	800.00	600.00	
(ii) For testing and inspection of Power Transformers including ratio test	Per unit	... 500.00	500.00	
(iii) For testing and inspection of Power Transformers excluding ratio test	Per unit	... 300.00	300.00	
(iv) Transformer ratio test only ...	Per unit	... 200.00	200.00	
(v) For testing and inspection of High Voltage Switches or Circuit Breakers	Per unit	... 800.00	800.00	
(vi) Other special High Voltage Tests	Per test	... 500.00	500.00	
(vii) Earth Electrode Resistance Tests	Per test	... 200.00	200.00	
(viii) For witnessing High Voltage test, terminations and special tests done by others	Per visit	... 200.00	200.00	

[Subsidiary]

**ELECTRICITY (INSPECTION)
(OVERHEAD LINES) RULES**

ARRANGEMENT OF RULES

RULE

1. Citation.
2. Interpretation.
3. Materials.
4. Line conductors.
5. Minimum size of line conductor.
6. Line conductor to be inaccessible.
7. Line conductors crossing other lines.
8. Minimum height of conductors.
9. Tensioning of line conductors.
10. Supports.
Loading Schedule.
11. Erection of line conductors at different voltages on same supports.
12. Inspection and maintenance of lines.
13. Provision to prevent danger.
14. Crossings.
15. Danger notices.
16. Unauthorised climbing.
17. Penalties.
18. Saving.

**ELECTRICITY (INSPECTION)
(OVERHEAD LINES) RULES**

68/1950.

made under section 15

1. These Rules may be cited as the Electricity (Inspection) (Overhead Lines) Rules. Citation.

2. In these Rules— Interpretation.

“line conductor” means conductors used for conveying a supply of electrical energy, including so much of any service line as may be under the control of the owner or licensee of the installation from which the energy is supplied;

“road” means any surfaced way used by vehicular traffic;

“support” shall be deemed to include any stays or struts associated with them.

3. All the materials used shall at the time of erection conform, except as may be otherwise approved by the Chief Inspector, to the specifications of the British Standards Institution so far as they are applicable and are not inconsistent with these Rules. Materials.

4. Line conductors shall be of copper, cadmium-copper, aluminium, steel-cored aluminium or such other material or combination of materials as may be approved by the Chief Electrical Inspector. Line conductors.

5. The minimum permissible size of line conductors shall be such as to have an actual breaking load of not less than 1,200 lb. Minimum size of line conductor.

6. Line conductors, other than those fully insulated for the voltage at which they are to operate, and neutral conductors connected with earth, shall be supported by suitable insulators, and shall be so placed as to prevent danger as far as is reasonably practicable. Line conductor to be inaccessible.

Regard shall be had to the normal use by the occupier of any land or premises (including maintenance work on the outside of

buildings), and where necessary the position of the line conductors shall be selected to provide sufficient clearance for safety in accordance with such use.

Line conductors crossing other lines.

7. Where a line conductor crosses over or under or is in proximity to any telegraph or telephone lines, such precaution shall be taken against accidental contact as may be prescribed by the Chief Inspector.

Where a line conductor crosses over or under or is in proximity to other overhead wires or line conductors other than telegraph or telephone lines, adequate clearances must be maintained under all conditions of service; and where the line conductor crosses over other line conductors, the precautionary measures prescribed in rule 14 for crossings shall be adopted.

Minimum height of conductors.

8. The height from the ground of any line conductor or earth wire or auxiliary conductor at any point on the span at a temperature of 122°F. shall not, except with the consent of the Chief Inspector in consultation with the Chief Technical Officer (Works), be less than the height appropriate to the voltage and situations as indicated below.

System voltage between line conductors	Over roads	Other than over roads	In positions inaccessible to vehicular traffic
Not exceeding 11,000 volts	ft. 20	ft. 17	ft. 15
Exceeding 11,000 volts but not exceeding 66,000 volts	—	20	16
Exceeding 66,000 volts but not exceeding 132,000 volts	22	22	18
Exceeding 132,000 volts	23	23	19

9. The tension in a line or auxiliary conductor, serial earthwire, serial cable or catenary wire shall not exceed three-quarters of its ultimate tensile strength under worst conditions of operation.

Tensioning of
line conductors.

10. Unless otherwise approved by the Chief Inspector, supports shall be constructed of wood, steel or reinforced concrete. Special precautions shall be taken to prevent the corrosion of all metal work at or below the surface of the ground.

Supports.

Supports and their foundations shall be so designed and constructed, taking into account the reactive forces exerted by the ground in which they are embedded, as to withstand the ultimate horizontal and vertical loads specified in paragraphs (1), (2) and (3) of the Loading Schedule contained in this rule and without exceeding the support strength limits stated in Table 1 thereof.

In no case shall the strength of a support in the direction of the overhead line be less than one-quarter of the required strength in a direction transverse to the line.

The ultimate transverse wind loadings on conductors and supports shall be as stated in Table 2 hereof. The appropriate wind pressure on conductors shall be determined according to their average height above ground throughout the span. The wind pressure on the lee-side members of lattice-steel or other compound structures shall be taken as one-half of the wind pressure on the windward-side members.

Loading
Schedule.

TABLE 1

SUPPORT STRENGTH LIMITS

<i>Type of Support</i>	<i>Strength Limit</i>
Steel supports	The strength corresponding to failure or permanent distortion in any part, e.g., crippling of compression members, shear or bearing deformation at bolts or rivets.

<i>Type of Support</i>	<i>Strength Limit</i>
Reinforced concrete poles	90 per cent of the strength at failure as defined in British Standard 607 of 1941 or, for stayed poles, 90 per cent of the crippling strength.
Wood poles	50 per cent of the extreme fibre stress or, for stayed poles, 50 per cent of the crippling strength.

TABLE 2

ULTIMATE TRANSVERSE WIND LOADS

Height above ground	Wind Pressure on Projected Area of	
	Cylindrical surfaces, including conductors	Flat surfaces
ft.	lb./ft. ²	lb./ft. ²
0—150	36	60
150—300	48	80
300—450	60	100
Above 450	72	120

The ultimate horizontal loads on supports due to conductor tension shall be calculated on the assumption that the ultimate horizontal component of the tension in any conductor is 1.5 times the horizontal component of the tension in the conductor as calculated under rule 9.

The ultimate vertical loads on supports shall comprise the weight of the supports themselves and any insulators and fittings attached thereto, together with the vertical loads imposed by the conductors.

Erection of line conductors at different voltages on same supports.

11. Where line conductors forming parts of systems at different voltages are erected on the same supports, adequate provision shall be made to guard against danger to persons authorised to carry out work on the lines and from the lower-voltage system being charged above its normal voltage by leakage from or contact with the higher-voltage system. Where any condition renders this impracticable

exemption may be claimed on application to the Chief Inspector. Adequate working clearances shall be provided between the lower-voltage line conductors and any higher-voltage line conductors.

12. Every overhead line, including its supports and structural parts and electrical appliances and devices belonging to or connected therewith, shall be regularly inspected and efficiently maintained.

Inspection and maintenance of lines.

13. Adequate means shall be provided to reduce to a practicable minimum the risk of a conductor remaining alive after it has fallen due to breakage or otherwise. All metal work other than conductors, within 10 feet of the ground wherever situated, shall be connected to earth on systems operating on a declared voltage above 12,000 volts. For this purpose, the metal-work shall be connected with earth at each support or alternatively a continuous earth-wire shall be provided and connected with earth at not less than four points in every mile. The design and construction of the system of earth connections shall be such that, when contact is made between a line conductor and metal connected with earth, the resulting leakage current shall not be less than twice the leakage current required to operate the devices which make the line dead. Where any condition renders this impracticable, exemption may be claimed on application to the Chief Inspector.

Provision to prevent danger.

It shall be permissible in a high-voltage system for a suitable inductive resistance to be inserted in the connection with earth, provided such inductive resistance shall have suitable characteristics as to ensure the immediate suppression of any arc between earth and the conductor and the immediate reduction of the voltage of the said conductor to or about earth potential in the circumstances mentioned above.

All stay wires shall be connected with earth except where they are connected with unearthed steelwork or non-metallic supports, in which case they shall be insulated by means of an insulator of a type approved for the purpose by the Chief Inspector, placed in each stay wire at a height of not less than ten feet from the ground.

All earth electrodes shall be so installed as to prevent danger from voltage gradients at ground level.

Crossings.

14. Where line conductors pass over roads, canals, navigable waters or railways, unless otherwise prescribed by the Chief Inspector, insulators shall have the next higher rating to that recommended in Table 2 of British Standard 137 of 1941 for the appropriate line voltage; and conductors shall be attached thereto in a manner approved by the Chief Inspector for this purpose.

Danger notices.

15. Each support on systems operating on a declared voltage of 6,600 volts and above shall have a danger notice of adequate size and of a permanent nature securely fixed to it.

Unauthorised climbing.

16. On systems operating on a declared voltage of 6,600 volts and above anti-climbing guards shall be attached to all poles or stays in situations where climbing by unauthorised persons might be anticipated.

Penalties.

17. If the owner or licensee of an installation makes default in complying with any of the preceding rules he shall, subject to the provisions of any Act, rule or regulation relating to the undertaking, be liable to a penalty of five hundred dollars for every such default and to a penalty of forty dollars for every day in which the default continues after the first day.

The recovery of a penalty under these Rules shall not affect the liability (if any) of the owner or licensee to make compensation in respect of any damage or injury which may have been caused by reason of the default.

Saving.

18. These Rules shall not apply to any overhead lines in existence at the date hereof and constructed and maintained under and in accordance with the provisions of any prior Regulations for overhead lines made by the Minister.

ELECTRICITY (INSPECTION) (SUPPLY) RULES

ARRANGEMENT OF RULES

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RULE

18. Precaution against metal work, becoming electrically charged.
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35. Notices by Undertakers. Procedure as to settlement of differences. Appeals.
36. Declared type of current, frequency and voltage at supply terminals.
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MISCELLANEOUS

38. Publication of Rules.
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ELECTRICITY (INSPECTION) (SUPPLY) RULES

217/1951.

made under section 15

1. These Rules may be cited as the Electricity (Inspection) (Supply) Rules. Citation.

2. In these Rules— Interpretation.

“circuit” means an electrical circuit forming a system or branch of a system;

“connected with earth” means connected with the general mass of earth in such manner as will ensure at all times an immediate and safe discharge of energy;

“consumer’s wiring” means the electric lines situated upon the consumer’s side of the supply terminals;

“daily penalty” means a penalty for each day on which any offence is continued after conviction therefor;

“dead” means at or about earth potential and disconnected from any live system;

“distributing main” means the portion of any main which is used or intended to be used for the purpose of giving origin to service lines for the purposes of general supply;

“electrically interconnected” means connected by actual metal to metal contact between the conductors of the respective systems;

“electrode boiler” means apparatus for the electrical heating of water by the passage of an electric current between electrodes immersed in water;

“general supply” means the general supply of energy to ordinary consumers, and includes, unless otherwise specially agreed with the local authority, the general supply of energy to the public lamps, where the local authority are not themselves the Undertakers, but shall not include the supply of energy to any one or more particular consumers under special agreement;

“generating station” means any station for generating electricity, including any buildings and plant used for the purpose, and the site thereof, and a site intended to be used for a generating station, but does not include any station for transforming, converting or distributing electricity;

“high voltage” means a voltage normally exceeding six hundred and fifty volts;

“insulation” means non-conducting material enclosing, surrounding or supporting a conductor or any part thereof and of such quality and thickness as to be suitable for the purposes of the Regulation in which the term is used;

“live” means electrically charged;

“local authority” means any authority having municipal or administrative jurisdiction over or within any area in respect of which any rights are exercisable under these Regulations;

“low voltage” means a voltage not exceeding two hundred and fifty volts under normal conditions subject however to the percentage variation allowed by these Regulations;

“main” means any electric line through which energy may be supplied or intended to be supplied by the Undertakers for the purposes of general supply;

“medium voltage” means a voltage exceeding two hundred and fifty volts but not exceeding six hundred and fifty volts under normal conditions subject however to the percentage variation allowed by these Regulations;

“outdoor switch station” means any ground whereon apparatus of the kind included within the definition of switch station is situated in the open air, and includes the said apparatus;

“overhead line” means any electric line which is placed above ground and in the open air;

“regulations of the Institute of Electrical Engineers” means the current edition of the Regulations for the Electrical Equipment of Buildings issued by the Institute of Electrical Engineers of Great Britain with the alterations and

additions issued by the Institution and approved by the Electricity Commissioners of Great Britain for the purposes of these Regulations;

“service line” means any electric line through which energy may be supplied or intended to be supplied by the Undertakers to a consumer either from any main or directly from the premises of the Undertakers;

“substation” means any premises or enclosure or part thereof, being large enough to admit the entrance of a person after the apparatus therein is in position, containing apparatus for transforming or converting energy to or from a voltage above medium voltage (other than transforming or converting solely for the operation of switchgear or instruments, or for testing equipment), with or without any other apparatus for switching, controlling or otherwise regulating the energy, and includes the apparatus therein;

“supply of electricity in bulk” means a supply of electricity to any local authority, company, body or person authorised to supply electricity for public sale or resale;

“supply terminals” means the end of the electric lines situated upon any consumer’s premises at which the supply of energy is delivered from the service lines;

“switch station” means any premises or enclosure or part thereof, being large enough to admit the entrance of a person after the apparatus therein is in position, containing apparatus for switching, controlling or otherwise regulating energy at a voltage above medium voltage but not for transforming or converting energy (other than transforming or converting solely for the operation of switchgear or instruments, or for testing equipment), and includes the apparatus therein;

“system” means an individual electrical system in which all the conductors and apparatus are electrically connected to a common source of voltage, and includes all the said conductors and apparatus;

“undertaker” means any local authority, company or person authorised to distribute and/or sell energy, but excludes

private companies operating under licence who generate energy for their own use, and that of their staff and any other person covered by their licence;

“works” means and includes electric lines, also any buildings, machinery, engines, works, matters or things of whatever description required to supply electricity and to carry into effect the object of the Undertakers under their respective Acts.

Any other words, terms and expressions to which meanings are assigned by other Acts and Regulations governing the supply of electricity and associated matters, shall have in these Regulations the same respective meanings.

APPLICATION OF RULES

Application of Rules.

3. These Rules shall come into force on such date as the Minister may by Notification appoint and shall apply as from such date to all authorised Undertakers and to their undertakings, and to all works of and all supplies of energy given by the Undertakers, whether brought into use or commenced before or after such date, subject to the following exceptions and qualifications:

(a) in relation to works and supplies brought into use or commenced before such date (hereinafter referred to respectively as “existing works” and “existing supplies”)—the following provisions shall apply:

- (i) rules 16 and 27(2) shall not apply to existing works; and rules 30(1), 32(1) and (2) and so much of rule 36(1) as is concerned with the declaration of the number of phases in the case of alternating current, shall not apply to existing supplies;
- (ii) rules 5 and 10 shall apply, in so far as they are concerned with any reconnection of existing works after the commencement of these Rules but not further or otherwise;

(iii) rules 13(1)(b) and (c), 14(b), 23, 26, and 33, unless the Minister otherwise prescribes in any particular case, have effect as from 1st January 1957, in their application to any existing works or existing supplies which at the commencement of these Rules do not comply or are given otherwise than in conformity with the relevant provisions thereof or as from the date (if earlier) when the existing works or existing supplies have been brought into compliance or are being given in conformity with the relevant provisions of the said Rules. However, the existing works or existing supplies shall, unless otherwise prescribed by the Minister, continue until 31st December 1956, or the said earlier date, but no longer, to be subject to the provisions of any corresponding prior Rules or Regulations which were applicable thereto.

Save as mentioned above, any existing works or existing supplies which at the commencement of these Rules do not comply or are given otherwise than in conformity with the relevant provisions of these Rules, shall be brought into compliance or given in conformity therewith as soon as may be after the commencement of these Rules;

(b) in relation to any supply of electricity in bulk given by the Undertakers to any other Undertakers, the said other Undertakers shall be deemed to be a consumer for the purposes of rules 9(2), 32, 33, 36 and 37, and the electric lines used for the purpose of affording the supply

of electricity in bulk shall be deemed to be a distributing main within the meaning of rule 37; but the said other Undertakers shall not be a consumer for any of the purposes of rules 26 to 35.

Saving.

4. Where any law provides for the determination of any question in respect of a consumer's installation, nothing in these Rules shall derogate from the right of any party to proceed under the provisions of that law.

ELECTRIC LINES AND SYSTEMS FOR LOW AND MEDIUM VOLTAGES

Test for resistance of insulation.

5. (1) Electric lines of the Undertakers for use at low voltage or medium voltage shall not be connected to a system for the purposes of the supply of energy unless the insulation of the electric lines has withstood either (a) the tests prescribed in that behalf in the appropriate specification of the British Standards Institution then current, or (b) the continuous application of a testing voltage of not less than five hundred volts between conductors and also between conductors and earth during a period of not less than fifteen minutes.

(2) If the tests prescribed in subrule (1) are made prior to the said electric lines being placed in position for the purposes of the supply of energy, the said electric lines after having been placed in position and before being connected to the system have withstood a further test for resistance of insulation by the application of a testing voltage of not less than five hundred volts between conductors and also between conductors and earth during a period of not less than one minute.

(3) Where any electric line for use at low voltage or medium voltage has been disconnected from a system for alteration or repair, the electric line shall not be reconnected to the system until the Undertakers have applied the test prescribed in subrule (2) and have satisfied themselves that the insulation of the electric line is in sound condition.

(4) The above provisions of this rule shall not apply to overhead lines unless the Minister so prescribes in any particular case.

6. The Undertakers shall maintain in sound condition the insulation of all electric lines and apparatus (including service lines up to the supply terminals) forming a system for use at low voltage or medium voltage, and so that the leakage current in the case of a direct current system shall not under normal conditions exceed one-thousandth part of the maximum supply current.

Maintenance of insulation.

7. Where a system at medium voltage is employed for giving a general supply, the voltage between earth and any conductor forming part of the said system shall not under normal conditions exceed low voltage.

Systems at medium voltage.

8. The following provisions shall apply to the connection with earth of alternating current systems at low voltage, and of systems at medium voltage employed for giving a general supply:

Connection with earth.

- (a) unless otherwise allowed by the Chief Electrical Inspector, a point of every such system shall be connected with earth;
- (b) the connection with earth shall be left to the discretion of the Undertakers;
- (c) in the case of a system comprising electric lines having concentric conductors, the external conductor shall be the one to be connected with earth;
- (d) the connection with earth may include a switch or link by means of which the connection may be temporarily interrupted for the purpose of testing or for locating a fault;
- (e) in the case of a direct current system, an ammeter shall be permanently inserted in the connection with earth and a continuous record of the amount of the leakage current (if any) passing through

the ammeter shall be taken and kept by the Undertakers. Where three-wire direct current systems are used, a fusible cut-out or automatic circuit breaker may be inserted in the connection with earth in parallel with a resistance of not more than five ohms;

- (f) in the case of an alternating current system, there shall not be inserted in the connection with earth any impedance (other than that required solely for the operation of switchgear or instruments), fusible cut-out or automatic circuit breaker, and the result of any test made to ascertain whether the current (if any) passing through the connection with earth is normal shall be duly recorded by the Undertakers; but for the purpose of operating relays for the remote control of switches, the Undertakers may insert in the connection with earth the secondary winding of a high frequency transformer, the ohmic resistance of the said secondary winding not to exceed 2,000 microhms at a temperature of 60° F. and its inductance not to exceed 10 microhenries;
- (g) alternating current systems which are connected with earth at one point as mentioned above may be electrically interconnected subject to the following condition and qualification, that is to say, where a system includes a generator or a transformer not having a mesh winding of low impedance, it shall not be electrically interconnected with another system if the neutral point of the generator or transformer is connected with earth;
- (h) where an alternating current system having a point connected with earth (whether electrically interconnected as mentioned above with another system or not) is used for affording a supply of

energy at low or medium voltage to an electrode boiler which is also connected with earth, the following conditions shall have effect:

- (i) the metal work of the electrode boiler shall be efficiently connected to the metal sheathing and metallic armouring (if any) of the electric line whereby energy is supplied to the electrode boiler;
- (ii) the Undertakers shall serve a notice on the Trinidad and Tobago Telephone Company Limited, Trinidad and Tobago External Telecommunications Company Limited and Radio Companies at least seven days prior to the date on which the supply of energy is to be afforded, specifying the location of every point (including the earth connection of the electrode boiler) at which the system (including any interconnected systems) is connected with earth.

Nothing in this Rule or in any approval given by the Chief Electrical Inspector thereunder shall—

- (a) relieve the Undertakers from the obligation to comply with the requirements of rule 25(1); or
- (b) affect any rights or remedies of the Trinidad and Tobago Telephone Company Limited, Trinidad and Tobago External Telecommunications Company Limited and Radio Companies in relation to injury to or injurious affection of their telephone lines, or confer any exemption from any liability or penalty in respect of any such injurious affection.

ELECTRIC LINES, SYSTEMS AND APPARATUS FOR HIGH VOLTAGES

9. (1) Every electric line of the Undertakers for use at high voltage shall be placed in position, properly jointed and duly

Completion and control.

completed and examined before it is brought into use for the purposes of the supply of energy.

(2) Except as otherwise provided in these Rules, every electric line as mentioned above shall during its use be in the sole charge of the Undertakers; but for any purpose connected with the efficiency and safety of the supply of energy to a particular consumer, the Undertakers may make arrangements with the consumer for control by an authorised person of the electric lines on the premises of the consumer through which energy is supplied to the premises.

Test for
resistance of
insulation.

10. (1) Electric lines and apparatus of the Undertakers for use at high voltage shall not be connected to a system for the purposes of the supply of energy unless the insulation of the electric lines and apparatus has withstood either (a) the tests prescribed in that behalf in the appropriate specification of the British Standards Institution then current; or (b) the continuous application between conductors and also between conductors and earth during a period of not less than fifteen minutes of alternating current either at a testing voltage equal to at least one and one-quarter times the normal working voltage to which the electric lines or apparatus will be subject under conditions of supply, or at a testing voltage equal to the working voltage mentioned above with the addition of 10,000 volts, whichever is the less. However, for the purposes of the alternative tests—

- (a) the testing voltage between the outer conductor and earth in cases where the outer conductor of an electric line having concentric conductors is to be connected with earth shall be 1,000 volts;
- (b) the above-mentioned working voltage between any phase of an alternating current system and earth in cases where the neutral conductor of the system is not to be connected with earth shall be deemed to be the voltage between phases;
- (c) the duration of the test may be reduced to one minute in the case of apparatus for use at high

voltage subject to the testing voltage being increased so as to equal not less than one and one-half times the above-mentioned working voltage, or the above-mentioned working voltage with the addition of 20,000 volts, whichever is the less;

- (d) direct current may be used instead of alternating current subject to the testing voltage being increased so as to exceed by at least fifty per cent the corresponding testing voltage prescribed for alternating current.

(2) If the tests prescribed in subrule (1) are made prior to the said electric lines and apparatus being placed in position for the purposes of the supply of energy, the electric lines and apparatus after having been placed in position and before being connected to the system have withstood a further test for resistance of insulation either by the application of the tests prescribed in subrule (1) whenever reasonably practicable, or by the application of a testing voltage of not less than 1,000 volts between conductors and also between conductors and earth during a period of not less than one minute.

(3) Where any electric line or apparatus for use at high voltage has been disconnected from a system for alteration or repair, the electric line or apparatus shall not be reconnected to the system until the Undertakers have applied the test prescribed in subrule (2) or have satisfied themselves that the insulation of the electric line or apparatus is in sound condition.

(4) The Undertakers shall duly record the result of every test made under this Rule.

11. (1) The following provisions shall apply to electric lines of the Undertakers for use at high voltage:

- (a) the conductors shall be enclosed in metal sheathing which shall be electrically continuous and connected with earth; and the conductivity of the metal sheathing shall be maintained and

Electric lines to be metal sheathed: Precautions against excess leakage.

reasonable precautions taken where necessary to avoid corrosion of the sheathing;

- (b) in the event of a failure of insulation occurring between one conductor and the metal sheathing at any point along an electric line as mentioned above, the impedance of the relevant circuit shall be such that with the full voltage maintained at the source of supply the current resulting from the failure shall be not less than twice the value of the current for which a suitable fusible cut-out of adequate rupturing capacity or other suitable overload preventive device has been set to operate or of the current required to operate a suitable discriminative fault current relay; but the operation of the overload preventive device mentioned above or of the discriminative fault current relay shall cause the automatic operation of a circuit breaker of adequate rupturing capacity;
- (c) the relevant circuit referred to above means the complete circuit from the source of supply to the point of failure of the insulation, including any connection with earth of the system of which the electric line as mentioned above forms part and any current limiting device inserted in the connection with earth; and the source of supply means the point at which energy is given to the system or circuit of which the electric line as mentioned above forms part;
- (d) where an electric line as mentioned above has concentric conductors and the external conductor is insulated from an outer metal sheathing and connected with earth, the external conductor may be regarded as the metal sheathing for the purposes of this rule provided that the above provisions as to conductivity are complied with.

(2) Nothing in the provisions of subrule (1) shall preclude the employment in generating stations, substations and switch stations (including outdoor substations and outdoor switch stations) of conductors for use at high voltage which are not enclosed in metal sheathing, or preclude the use of electric lines laid before the commencement of these Rules to which the provisions of rule 21(1) apply.

(3) This Rule shall not apply to overhead lines unless the Minister so prescribes in any particular case.

12. The following provisions shall apply to the connection with earth of systems for use at high voltage:

Connection with earth.

- (a) unless otherwise allowed by the Chief Electrical Inspector and subject as provided below, a point of every such system shall be connected with earth;
- (b) the connection with earth shall be left to the discretion of the Undertakers;
- (c) in the case of a system as mentioned above comprising electric lines having concentric conductors, the external conductor shall be the one to be connected with earth;
- (d) where the Undertakers propose to connect with earth at one point only an existing system for use at high voltage which has not hitherto been so connected with earth, the Undertakers shall give notice and particulars to the Trinidad and Tobago Telephone Company Limited, Trinidad and Tobago External Communications Company Limited and Radio Companies of the proposed connection with earth and the notice shall be deemed to be a notice of works served upon those companies within the meaning and for the purposes of section 46(2) of the Trinidad and Tobago Electricity Commission Act;

Ch. 54:70.

- (e) where a system having a point connected with earth is used for affording a supply of energy at high voltage to an electrode boiler which is also connected with earth, the following conditions shall have effect:
- (i) the metal work of the electrode boiler shall be efficiently connected to the metal sheathing and metallic armouring (if any) of the high voltage electric line whereby energy is supplied to the electrode boiler;
 - (ii) the supply of energy at high voltage to the electrode boiler shall be controlled by a suitable automatic circuit-breaker so set as to operate in the event of the phase currents becoming unbalanced to the extent of ten per cent of the rated current consumption of the electrode boiler under normal conditions of operation; and if in any case a higher setting is essential to ensure stability of operation of the electrode boiler, the setting may be increased to, but shall in no circumstances exceed, fifteen per cent of the rated current consumption of the electrode boiler under normal conditions of operation;
 - (iii) an inverse time element device may be used in conjunction with the aforesaid automatic circuit-breaker to prevent the operation thereof unnecessarily on the occurrence of unbalanced phase currents of momentary or short duration;
 - (iv) the Undertakers shall serve a notice on the above-mentioned companies, at least seven days prior to the date on which the supply of energy is to be afforded specifying the location of every point (including the earth

connection of the electrode boiler) at which the system is connected with earth.

Nothing in this Rule or in any approval given by the Chief Electrical Inspector thereunder shall affect any rights or remedies of the said companies, in relation to injury to, or injurious affection of, their telephone or telegraph lines, or confer any exemption from any liability or penalty in respect of any such injurious affection.

TRANSFORMATION AND CONTROL OF ENERGY AT HIGH VOLTAGE

13. (1) Where energy at high voltage is transformed, converted, regulated or otherwise controlled in substations or switch stations (including outdoor substations and outdoor switch stations), in street boxes constructed underground, or in fire-resisting cases on the premises of a consumer, the following provisions shall have effect:

General conditions as to transformation, control, etc.

- (a) substations and switch stations shall preferably be erected above ground, but where necessarily constructed underground there shall be due provision for ventilation and drainage;
- (b) outdoor substations and outdoor switch stations shall (unless the apparatus is completely enclosed in a metal casing connected with earth, the said apparatus also being connected with the system by armoured electric lines) be efficiently protected by fencing not less than eight feet in height or other means so as to prevent access to the electric lines and apparatus therein by any unauthorised person;
- (c) underground street boxes (other than substations) which contain transformers shall not also contain switches or other apparatus, and any switches, fusible cut-outs or other apparatus required for controlling or other purposes shall be fixed in separate receptacles preferably above ground;

- (d) fire-resisting casings on the premises of a consumer, preferably of metal connected with earth, shall completely enclose all electric lines (other than overhead lines) and apparatus on the premises designed to be electrically charged at high voltage and shall be secured so as to prevent access by any unauthorised person.

(2) Wherever energy at high voltage is transformed, converted, regulated or otherwise controlled, the works of the Undertakers shall be labelled with an appropriate danger notice, with the name of the Undertakers and with the address of their local office at which an officer or servant of the Undertakers will be in attendance.

Further
constructional
details in
certain cases.

14. The following provisions as to constructional details shall have effect where energy at high voltage is transformed, converted, regulated or otherwise controlled:

- (a) in street boxes or similar structures or in fire-resisting casings on the premises of a consumer, all doors or covers shall be so secured that they cannot be opened except by means of a key or special appliance. The enclosed conductors and apparatus shall be so constructed, protected and arranged that when the door or cover giving access to an operating or switch panel is opened, it shall not be possible for the person opening the door or cover to come into accidental contact with metal electrically charged at high voltage. Unless the conditions of supply are such that the whole of the enclosed conductors and apparatus may be made dead at the same time for the purpose of cleaning or for other work thereon, the conductors and apparatus shall be so arranged that they may be made dead in sections, and the sections shall be so separated by divisions or screens from all adjacent live metal that work on any section

made dead may be carried on by an authorised person without danger. Every fusible cut-out shall either be capable of being made dead by a switch or shall be so constructed and placed that it can be handled without danger by an authorised person for the purpose of renewal;

- (b) on the supports of overhead lines or in other suitable positions (other than outdoor substations or outdoor switch stations) adjacent to the electric lines of the system concerned, conductors and transforming or switching apparatus, unless completely enclosed and connected with the system by armoured electric lines or effectively screened, shall be so arranged that no live metal with which contact can be made shall be at a less distance than fifteen feet from the ground or less than fifteen feet from any place accessible to an unauthorised person or less than the appropriate distance specified in Table IV of British Standard Specification No. 162, 1934, from any operating or inspecting platform upon which it is intended that any authorised person may stand while live metal is exposed. Provision shall be made to prevent so far as reasonably possible unauthorised climbing; and where a portable ladder is used for the purpose of operating, special means shall be provided to secure the ladder in position and the arrangements shall be such that there is no danger to an authorised person when operating. The means provided for disconnecting a transformer, circuit-breaker or fusible cut-out from electric lines which are live at high voltage, and also the said fusible cut-out itself if intended to be renewed while the electric lines are live at high voltage, shall be so constructed and placed that they can be operated or renewed, as the case may be, by an authorised person without danger.

Transforming apparatus; precautions against danger.

15. Where energy is transformed, suitable provision shall be made, either by connecting with earth a point of the system at the lower voltage or otherwise, to guard against danger by reason of the system becoming accidentally charged above its normal voltage by leakage from or contact with the system at the higher voltage.

ELECTRIC LINES AND APPARATUS (GENERAL) OTHER THAN CONSUMER'S INSTALLATIONS

Standard of construction of electric lines.

16. The standard of construction of electric lines of the Undertakers (including service lines up to the supply terminals) shall unless otherwise allowed by the Chief Electrical Inspector be not lower than that prescribed in the appropriate specification (if any) of the British Standards Institution current at the time of their manufacture.

Precaution against excess energy.

17. Every circuit of the Undertakers (other than service lines from distributing mains) shall be protected against excess energy by a suitable fusible cut-out or automatic circuit-breaker of adequate rupturing capacity which shall not be inserted in any conductor permanently connected with earth.

Precautions against metal work becoming electrically charged.

18. (1) Where any electric line of the Undertakers (including a service line up to the supply terminals) at the time it is placed in position crosses or is in proximity to any pipe, line or other metal, precautions shall be taken by the Undertakers to prevent the pipe, line or other metal from becoming electrically charged.

(2) Any metal work enclosing, supporting or otherwise associated with electric lines and apparatus unless designed to serve as a conductor shall where necessary to prevent danger be connected with earth.

(3) The above provisions of this rule shall not apply to overhead lines.

Overhead lines.

19. Overhead lines of the Undertakers (including overhead service lines up to the supply terminals) shall be erected and maintained in accordance with the provisions of any rules in that

behalf made under the Electricity (Inspection) Act, and in force and applicable at the date of the erection of the overhead lines, and also of these Rules save in so far as the same are expressly excluded from application thereto. Ch. 54:72.

Nothing in this rule shall relieve the Undertakers from the obligation of obtaining any necessary consent under the relevant laws to the placing of an electric line above ground.

20. (1) In delivering energy to a substation or switch station (including an outdoor substation or switch station) or to the premises of a consumer the Undertakers shall exercise all due precautions so as to avoid risk of causing fire therein. Precaution against risk of fire.

(2) Where a substation or switch station is situated in any building so that a fire in the substation or switch station might involve risk to the building and the substation or switch station contains oil-immersed transformers or switches involving the use of more than two hundred gallons of oil in any one oil tank, receptacle or chamber, provision shall be made for the draining away or removal of any oil which may leak or escape from the tanks, receptacles or chambers containing the same; special precautions shall be taken to prevent the spread of any fire resulting from the ignition of the oil from any cause; and adequate provision shall be made for the extinguishing of any fire which may occur. Spare oil shall not be stored in any such substation or switch station.

21. (1) Where the Undertakers have prior to the commencement of these Rules brought into use an electric line (other than an overhead line) which is not completely enclosed in a continuous metallic sheathing connected with earth and is insulated or protected *in situ* by composition or material of a bituminous character the electric line shall be periodically inspected where accessible, and the result of each such inspection shall be duly recorded by the Undertakers. Bituminous, etc., insulation or protection.

(2) It shall not be permissible for the Undertakers after the commencement of these Rules to bring into use any further

electric line as mentioned above which is insulated or protected *in situ* by any composition or material known to be liable to produce noxious or explosive gases on excessive heating.

Receptacles for electric lines and apparatus.

22. All conduits, pipes, casings, street boxes and similar structures used by the Undertakers as receptacles for electric lines or apparatus shall be constructed of durable material, and where placed under carriageways shall be of ample strength to withstand heavy traffic.

Street boxes, underground substations and switch stations.

23. (1) Reasonable means shall be taken to prevent any influx of water into street boxes.

(2) Where electric lines forming part of different systems pass through the same street box they shall be readily distinguishable from one another, and all electric lines at high voltage in street boxes shall be adequately supported and protected so as to minimise risk of damage to or from adjacent electric lines.

(3) The expression “street box” where used in this rule shall include an underground substation and an underground switch station.

(4) Nothing in this rule shall relieve the Undertakers from the obligation to comply with the requirements of rules 13 and 14 in relation to the use of street boxes for the transformation, conversion, regulation or control of energy at high voltage.

Underground shafts, etc.

24. Where access to any electric line is obtained through underground shafts, passages or the like not subject to regular inspection, no person shall enter any such shafts, passages or the like until the same have been tested by the Undertakers for the presence of noxious or explosive gases, and until any such gases discovered as the result of the test have been dispelled.

Precautions against failures of supply, etc. Notice of failures.

25. (1) The layout of the electric lines of the Undertakers for the supply of energy throughout their area of supply shall under normal working conditions be sectionalised and so arranged, and

provided where necessary with fusible cut-outs or automatic circuit-breakers so located, as to restrict within reasonable limits the extent of the portion of the undertaking affected by any failure of supply.

*(2) During and in connection with the installation, extension, replacement, repair and maintenance of any of their works, the Undertakers shall take all reasonable precautions to avoid any accidental interruptions of supply, and also to avoid danger to the public or to any employee or authorised person when engaged on any operation as mentioned above not coming within the scope of the Factories Ordinance.

(3) The Undertakers shall send to the Chief Electrical Inspector notice of any failure involving a substation shut down for over two hours and the notice shall be sent by the earliest practicable post after the failure occurs or, as the case may be, after the failure becomes known to the Undertakers.

Ch. 30 No. 2.
(1950 Ed.).

SUPPLY TO PREMISES OF CONSUMERS: CONSUMERS' INSTALLATIONS

26. The separate conductors of service lines shall be permanently marked by colouration, labels or otherwise as close as practicable to the supply terminals so as to indicate in a distinctive manner the polarity of the conductors or the neutral and live phase conductors as the case may be, and in the manner prescribed in regulation 309 of the Regulations of the Institute of Electrical Engineers.

Identification of
conductors of
service lines.

27. (1) The Undertakers shall be responsible for all electric lines and apparatus placed by them on the premises of a consumer and either belonging to the Undertakers or under their control (whether forming the whole or part of the consumers installation or not) being installed and maintained in a safe condition and suitable for their respective purposes and being so fixed and protected as to prevent so far as is reasonably practicable leakage to any adjacent metal.

Undertakers
lines, etc., on
consumers
premises.

*See Note on page 2.

(2) The standard of construction and installation adopted by the Undertakers in complying with subrule (1) in so far as it relates to the whole or any part of a consumer's installation shall not be lower than that which the Undertakers would be prepared to accept under rules 29 to 33.

(3) The obligation imposed by subrule (1) in regard to the maintenance of any electric lines and apparatus as mentioned above situated on the consumer's side of the supply terminals and forming the whole or part of a consumer's installation shall be subject to the terms of any agreement entered into between the Undertakers and the consumer with respect to the letting on terms of hire or hire-purchase of the said whole or part of the consumer's installation.

*(4) Nothing in this rule shall relieve the owner or occupier of any premises, being a consumer within the meaning of these Rules, from any obligation imposed on him by the Factories Ordinance, any regulations made under the Petroleum Act or the Drilling Regulations.

Ch. 30 No. 2.
(1950 Ed).
Ch. 62:01.
Sub. Leg.
Ch. 61:01.

As to
connection with
consumer's
installations
where leakage
exists.

28. The Undertakers shall not permanently connect a consumer's installation with their electric lines unless they are reasonably satisfied that the connection, if made, would conform to regulation 1103 of the Regulations of the Institute of Electrical Engineers.

General
conditions as to
supply to
consumers.

29. (1) The Undertakers shall not be compelled to commence or, subject to rule 34, to continue to give a supply of energy to any consumer unless they are reasonably satisfied that the consumer's installation complies with the Regulations of the Institute of Electrical Engineers or other recognised standards where applicable.

(2) Subrule (1) shall not apply in respect of the supply of energy by the Undertakers to any consumer's installation to which the provisions of the Factories Ordinance or any regulations made under the Petroleum Act, or the Drilling Regulations, may be applicable.

*See Note on page 2.

30. (1) The Undertakers shall not commence a supply of energy at low voltage to any consumer from more than one pair of conductors of a three-wire or multi-phase system at medium voltage unless—

Supply at low voltage from more than one pair of conductors of system at medium voltage.

- (a) the total rating in kilowatts of the apparatus (including electric lamps) connected or intended to be connected to the consumer's wiring exceeds eight kilowatts; and
- (b) the giving of the supply at low voltage from more than one pair of conductors of a system as mentioned above is necessary to avoid a variation in excess of the limits allowed by regulation 32 in the voltage declared to that consumer or to any other consumer supplied from the same distributing main.

(2) The Undertakers shall not in any case be compelled to commence or, subject to the provisions of rule 34, to continue to give a supply of energy at low voltage to any consumer from more than one pair of conductors of a system as mentioned above unless they are reasonably satisfied that the consumer's installation complies with the Regulations of the Institute of Electrical Engineers or other recognised standards where applicable.

*(3) The provisions of subrule (2) shall not apply in respect of the supply of energy by the Undertakers to any consumer's installation to which the provisions of the Factories Ordinance, or any regulations made under the Petroleum Act, or the Drilling Regulations are applicable.

Ch. 30 No. 2.
(1950 Ed.).
Ch. 62:01.
Sub. Leg.
Ch. 61:01.

31. (1) The Undertakers shall not be compelled to commence or, subject to rule 34, to continue to give a supply of energy at medium voltage to any consumer unless they are reasonably satisfied that the consumer's installation complies with the Regulations of the Institute of Electrical Engineers or other recognised standards where applicable.

Supply at medium voltage.

*(2) Subrule (1) shall not apply in respect of the supply of energy by the Undertakers to any consumer's installation to which

*See Note on page 2.

the provisions of the Factories Ordinance, or any regulations made under the Petroleum Act, or the Drilling Regulations are applicable.

Supply at
high voltage.

32. (1) The Undertakers shall not commence a supply of energy at high voltage to any consumer unless—

- (a) all conductors and apparatus intended for use at high voltage and situated on the premises of the consumer are inaccessible to the consumer, and all operations in connection with the conductors and apparatus are carried out by the Undertakers by arrangement with the consumer; or
- (b) the consumer gives to the Undertakers a guarantee in writing that every portion of the consumer's installation which is for use at high voltage will be maintained in an efficient state and, if so required, to the satisfaction of the Undertakers; that in cases where the portion of the consumer's installation is not enclosed in a building or other structure to which access can only be obtained by means of a key or special appliance, an authorised person will be available to cut off the supply in the event of emergency; and that instruction as to the treatment of persons suffering from electric shock will be affixed on or in the premises of the consumer.

(2) The Undertakers shall not in any case be compelled to commence, or subject to the provisions of rule 34, to continue to give a supply of energy at high voltage to any consumer unless they are reasonably satisfied in respect of the consumer's installation—

- (a) that no metal work designed to be electrically charged at high voltage will normally be exposed so that it can be touched;
- (b) that all conductors for use at high voltage (other than overhead lines) are completely enclosed in metal which is electrically continuous and adequately protected against mechanical damage;

- (c) that all metal work enclosing, supporting or associated with the consumer's installation, other than that designed to serve as a conductor, is where necessary to prevent danger connected with earth, and in the manner prescribed in regulation 10 of the Regulations of the Institute of Electrical Engineers;
- (d) that the supply of energy to each motor or separate piece of apparatus is controlled by an efficient cut-off switch placed in such a position as to be readily accessible to and easily operated by the person in charge of the motor or apparatus and so connected in circuit that by its means all voltage can be cut off from the motor or apparatus itself and from any regulating switch, resistance or other device associated therewith;
- (e) that all windings at high voltage of motors or other apparatus within reach from any position in which a person may require to be, are efficiently protected so as to prevent danger;
- (f) that where transforming apparatus is used, suitable provision is made, either by connecting with earth a point of the circuit at the lower voltage or otherwise, to guard against danger by reason of the circuit becoming accidentally charged above its normal voltage by leakage from or contact with the circuit at the higher voltage;
- (g) that unless the conditions are such that the whole of the conductors and apparatus for use at high voltage may be made dead at the same time for the purpose of cleaning or for other work thereon, the conductors and apparatus are so arranged that they may be made dead in sections, and that the sections are so separated by divisions or screens from all adjacent metal which is live that work on any section made dead may be carried on by an authorised person without danger;

- (h) that an adequate gangway or working space is provided in front of any switch board (other than panels for controlling circuits at low voltage) and at parts of the installation where live conductors can be exposed;
- (i) that adequate means are provided for preventing access by the public or any unauthorised person to any part of the consumer's installation which is designed to be electrically charged at high voltage.

* (3) The provisions of subrules (1) and (2) shall not apply in respect of the supply of energy by the Undertakers to any consumer's installation to which the provisions of the Factories Ordinance, or any regulations made under the Petroleum Act, or the Drilling Regulations may be applicable.

Ch. 30 No. 2.
(1950 Ed.).
Ch. 62:01.
Sub. Leg.
Ch. 61:01.

(4) The Undertakers shall give to the Senior Factory Inspector notice of their intention to commence a supply of energy at high voltage to any factory within the meaning of section 2 of the Factories Ordinance and to any other place to which the provisions of the Factories Ordinance apply.

Supply for
luminous tube
signs on outside
of premises.

33. (1) The Undertakers shall not knowingly commence or, subject to the provisions of rule 34, continue to give a supply of energy to any consumer who proposes to transform or is transforming the energy to a higher voltage for the purposes of a luminous tube sign or the like on the outside of any premises unless the consumer gives to the Undertakers a guarantee in writing that the installation complies with the Regulations of the Institute of Electrical Engineers or other recognised standards.

* (2) Subrule (1) shall not apply in respect of the supply of energy by the Undertakers to any consumer's installation to which the provisions of the Factories Ordinance, or any Regulations made under the Petroleum Act, or the Drilling Regulations are applicable.

Ch. 30 No. 2.
(1950 Ed.).
Ch. 62:01.
Sub. Leg.
Ch. 61:01.
Discontinuance
of supply in
certain
circumstances.

34. (1) Where a supply of energy is being afforded to a consumer, and the Undertakers after making such examination as

* See Note on page 2.

the circumstances permit have reasonable grounds for supposing that the installation does not conform to regulation 1103 of the Regulations of the Institute of Electrical Engineers or that the installation or any part thereof fails to fulfil any requirements of rules 29 to 33, the following provisions shall [subject as provided in subrule (2)] have effect:

- (a) in any case where the Undertakers are *prima facie* satisfied that immediate action is justified as a work of emergency in the interest of the public safety or in order to avoid undue interference with the efficient supply of energy to other consumers, they may as a work of emergency, forthwith discontinue the supply of energy to the consumer's installation and shall give immediate notice in writing of the discontinuance to the consumer, specifying the matter complained of;
- (b) in any other case, the Undertakers may by notice in writing require the consumer within a reasonable time after the service of the notice to permit an officer or servant of the Undertakers duly authorised by them in writing to inspect and test the installation at any time between the hours of 7.00 a.m. and 7.00 p.m. If the consumer does not give all due facilities for inspection and testing, or if, as the result of any such inspection or testing, the officer or servant makes a report confirming that the installation does not comply with regulation 1103 of the Regulations of the Institute of Electrical Engineers or reports that the installation or any part thereof fails to fulfil any requirements of rules 29 to 33, the Undertakers may forthwith by notice in writing specify the matter complained of; and if the consumer fails to show to the reasonable satisfaction of the Undertakers within such reasonable period as may be specified in that behalf in the notice that the

matter has been remedied, the Undertakers may, on the expiration of the period but subject as provided below, discontinue the supply of energy to the consumer's installation, giving immediate notice in writing of the discontinuance to the consumer;

- (c) any difference which may arise between a consumer and the Undertakers in regard to any matter complained of or as to the period specified for remedying the same in any notice as mentioned above shall be settled in manner provided for by rule 36;
- (d) in the exercise of the powers conferred by paragraph (b), the Undertakers shall not discontinue the supply of energy pending the settlement of any difference referred to in paragraph (c), and shall in no case discontinue the supply of energy to the whole of the consumer's installation where it is practicable to disconnect that portion in respect of which any matter is complained of; but nothing in this paragraph shall prevent the Undertakers from exercising the powers conferred by paragraph (a) in the event of the development of a condition of emergency as therein provided;
- (e) where in pursuance of this rule the Undertakers have discontinued the supply of energy to the consumer's installation or any part thereof, the Undertakers shall not recommence the supply of energy until they are reasonably satisfied in respect of the consumer's installation that any requirements of rules 28 to 33 have been fulfilled or until it has been determined or decided in manner provided for by rule 35 that the Undertakers are not entitled under rules 28

to 33 to decline to recommence the supply, and thereupon the supply of energy shall be recommenced by the Undertakers.

(2) The above provisions of this rule shall extend so far as applicable and with the necessary adaptations to any electric lines and apparatus situated on the consumer's side of the supply terminals and belonging to the Undertakers or under their control within the meaning of rule 27; and where the supply of energy has been discontinued in pursuance of the said provisions, the Undertakers shall, subject to the terms of any agreement entered into between the Undertakers and the consumer with respect to the letting on terms of hire or hire purchase of any such electric lines and apparatus, forthwith remedy any defect in the electric lines and apparatus and recommence the supply of energy.

*(3) The above provisions of this rule in so far as they relate to any requirements of rules 29 to 33 shall not apply in respect of the supply of energy by the Undertakers to any consumer's installation to which the provisions of the Factories Ordinance or any regulations made under the Petroleum Act, or the Drilling Regulations, are applicable.

Ch. 30 No. 2.
(1950 Ed.).
Ch. 62:01.
Sub. Leg.
Ch. 61:01.

35. (1) In any case where the Undertakers in pursuance of these Rules decline to connect a consumer's installation or any part thereof with their electric lines or to commence or continue to give a supply of energy thereto or decline to recommence the supply of energy after the same has been discontinued, they shall serve on the consumer a notice in writing stating their reasons for so declining.

Notices by
Undertakers.
Procedure as to
settlement of
differences.
Appeals.

(2) Any difference which may arise between a consumer and the Undertakers either with reference to any notice under subrule (1), or under rule 34, or with reference to any consumer's installation to which the provisions of rule 27(1) and (2) apply, shall be determined by the Chief Electrical Inspector on the application of the consumer or his authorised agent or of the Undertakers, as the case may be. The Minister shall determine the

*See Note on page 2.

fee to be paid to the Chief Electrical Inspector and the Chief Electrical Inspector shall determine by which of the parties the costs of and incidental to the proceedings before him (including the said fee) or any portion of such costs shall be paid. However, in the case of any consumer's installation (or any part thereof) which was connected with the electric lines of the Undertakers and supplied with energy prior to the commencement of these Rules it shall not be competent for the Chief Electrical Inspector to determine that the Undertakers were or are entitled under rules 29 to 32 to refuse a supply of energy thereto if the Chief Electrical Inspector is satisfied that—

- (a) the installation has continued to function satisfactorily up to the material time;
- (b) the installation is to be or is being continued in use only within the limits of the maximum power for which it was originally intended; and
- (c) there are no grounds for supposing that the installation will fail to continue to function satisfactorily for a further reasonable period without risk of danger.

(3) If the Undertakers or the consumer or his authorised agent are or is dissatisfied with the determination of the Chief Electrical Inspector, they or he may appeal to the Minister and thereupon the Minister shall enquire into and decide upon the matter of the appeal and his decision shall be final and binding on all parties.

(4) This rule and rule 34 shall be endorsed on every notice given by the Undertakers to a consumer under the provisions of either of the said rules or alternatively the notice shall be accompanied by a copy of each of the said rules.

Declared type of current, frequency and voltage at supply terminals.

36. (1) Before commencing to give a supply of energy to any consumer, the Undertakers shall declare to that consumer—

- (a) the type of current, whether direct or alternating, which they propose to supply;

- (b) in the case of alternating current, the number of phases and also the constant frequency at which they propose to deliver the energy to the supply terminals; and
- (c) the constant voltage at which they propose to deliver the energy to the supply terminals.

(2) The type of current, the number of phases and the frequency in the case of alternating current and the voltage declared as mentioned above shall be constantly maintained subject as respects the frequency to a permissible variation not exceeding one minute at any given time as measured by a synchronous clock above or below the declared frequency and as respects the voltage to a permissible variation not exceeding six per cent above or below the declared voltage, and shall not be altered or departed from nor shall the above-mentioned permissible variations be exceeded except with the consent of the Minister on the advice of the Chief Electrical Inspector and subject to such terms and conditions as they may impose.

(3) Public notice in such manner and for such period as the Minister may approve or require shall be given by the Undertakers of any application made by them for the consent of the Minister to an alteration of the declared type of current, or the number of phases or the frequency in the case of alternating current, or the voltage, as the case may be, or of the above-mentioned permissible limits of variation in respect of frequency or voltage.

37. From the time when the Undertakers commence to supply energy through any distributing main, they shall maintain continuously a supply of energy sufficient for the use of all consumers for the time being entitled to be supplied from that distributing main.

Undertakers to provide constant supply.

However, for the purposes of testing or for any other purposes whatsoever connected with the proper working of the undertaking, or in case of emergency affecting or liable to affect the proper working of any other undertaking, from which the Undertakers receive a supply of electricity directly or indirectly, the supply of

energy may be discontinued by the Undertakers for such period as may be necessary subject (except in any case of emergency) to not less than 24 hours' notice being given by the Undertakers to all consumers likely to be affected by the discontinuance.

MISCELLANEOUS

Publication of Rules.

38. The Undertakers shall within one month after they have become subject to these Rules serve a printed copy thereof upon the local authority in cases where the local authority are not themselves the Undertakers; and the Undertakers shall also keep printed copies of these Rules at their principal office within the area of supply and shall supply a copy thereof to any person demanding the same at a price per copy not exceeding the price paid by the Undertakers themselves for the printed copies.

Inspections, examinations and tests.

39. The Chief Electrical Inspector and Inspectors duly authorised by the Minister shall be entitled at all times to inspect and to make examinations and tests of the works of the Undertakers and to examine and take records of the readings of any instruments, and the Undertakers shall afford all due facilities for any such inspections, examinations and tests; but the Undertakers shall not be responsible for any interruption in the supply of energy which may be occasioned by any such inspection, examination or test.

Penalty for default.

40. If the Undertakers make default in complying with any of the preceding rules with the exception of rules 5(2); 8(b) and (d); 9(2); 11(1)(c) and (d); 11(2) and (3); 12(b); 12(e)(iii); 27(3) and (4); 29(2); 30(3); 31(2); 32(3); 33(2); 34(1)(a) and (b); 34(3); 35(2)(a), (b) and (c); 35(3), they shall, subject to the provisions of any law relating to the undertaking, be liable on conviction to a penalty of two hundred dollars for every such default and to a daily penalty of two hundred dollars. The recovery of a penalty under these Rules shall not affect the liability (if any) of the Undertakers to make compensation in respect of any damage or injury which may have been caused by reason of the default.