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STATUTORY INSTRUMENTS

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**1988 No. 1057**

**The Electricity Supply Regulations 1988**

**PART I**  
**INTRODUCTORY**

**Citation and commencement**

1. These Regulations may be cited as the Electricity Supply Regulations 1988 and shall come into force on 1st October 1988.

**Application of Regulations**

2.—(1) Subject to the following provisions of this regulation, regulations 7(3)(a)(ii), 7(8)(b), 7(9), 9, 15(2), 16, 20(2)(b)(i) and 26 shall not apply to supplier's works or supplies where those works were brought into use or supplies commenced prior to the date of coming into force of these Regulations and regulation 4(2) and the proviso to regulation 25(1)(c) shall not apply to any Supplier's works brought into use on or before 31st December 1936.

(2) Where the regulations specified in paragraph (1) do not apply to any supplier's works or supplies the provisions of the Electricity Supply Regulations 1937(1) or the Electricity (Overhead Lines) Regulations 1970(2) equivalent to the regulations mentioned in paragraph (1) (including any approvals or authorities granted or given under those provisions) in force in respect of those works or supplies immediately prior to the coming into force of these Regulations shall apply until the date specified in paragraph (3) as if those provisions had been contained in these Regulations.

(3) The date referred to in paragraph (2) is the date on which any material alteration is made to the supplier's works or supplies in question.

(4) From the date specified in paragraph (3) the exception in paragraph (1) shall cease to apply to the extent of any material alteration referred to in paragraph (3).

**Interpretation**

3.—(1) In these Regulations, unless the context otherwise requires—

“apparatus” means any plant, equipment, apparatus and appliances used for the purposes of generating, transmitting and distributing energy, and electric lines, fittings, apparatus and appliances designed for use by consumers of energy for lighting, heating, motive power and other purposes for which energy can be used;

“bonding conductor” means a conductor providing equipotential bonding;

“circuit protective conductor” means a conductor used for protection against electric shock which connects the exposed conductive parts of apparatus with earth but does not include any conductor which is used as a neutral conductor;

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(1) The Electricity Supply Regulations were made by the Electricity Commissioners under section 6 of the Electric Lighting Act 1882 (c. 56) and are not a statutory instrument.  
(2) S.I.1970/1355

“conductor” means an electrical conductor arranged to be electrically connected to a system but does not include conductors used or intended to be used solely for the purposes of control or regulation of supply or for communication;

“connected with earth” means connected with earth in such manner as will at all times provide a rapid and safe discharge of energy, and cognate expressions shall be construed accordingly;

“consumer” means any person supplied or entitled to be supplied by a supplier but shall not include—

- (a) an Electricity Board (other than in regulation 32); or
- (b) in regulations 25, 27, 28 and 29, any body authorised by any enactment to carry goods and passengers by railway in respect of any supply to meet its haulage or traction requirements;

“consumer’s installation” means the electric lines situated upon the consumer’s side of the supply terminals together with any apparatus permanently connected or intended to be permanently connected thereto;

“danger” includes danger to health or danger to life or limb from shock, burn, injury or mechanical movement to persons, livestock or domestic animals, or from fire attendant upon the generation, transformation, supply or use of energy;

“distributing main” means any electric line through which energy may be supplied or is intended to be supplied by a supplier directly to only one consumer or indirectly to more than one consumer but does not include a service line;

“earth” means the general mass of the earth;

“earth electrode” means a conductor or group of conductors in intimate contact with and providing a connection with earth;

“earthing terminal” means a terminal directly connected to the supply neutral conductor at the supplier’s fusible cut-out, or automatic switching device nearest to the supply terminals;

“electric line” means a wire, conductor, or other means used or intended to be used for the purpose of conveying, transmitting or distributing energy (including to earth) and any casing, coating, covering, tube, pipe, or insulator enclosing, surrounding, or supporting that line, or any part thereof, and for the purposes of regulations 12 to 16 (inclusive) includes any apparatus connected therewith for the purpose of conveying, transmitting or distributing energy;

“Electricity Board” means an Area Board as defined in the Electricity Act 1947, the North of Scotland Hydro-Electric Board or the South of Scotland Electricity Board or the Central Electricity Generating Board;

“energy” means electrical energy;

“generating station” means those parts of any premises which are principally used for the purposes of generating energy;

“high voltage” means any voltage exceeding low voltage;

“Institution of Electrical Engineers Regulations” means the 15th edition of the Regulations for Electrical Installations published by the Institution of Electrical Engineers with amendments published on 1st January 1983, 1st May 1984, 1st January 1985, 1st January 1986 and 12th June 1987;

“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, and cognate expressions shall be construed accordingly;

“low voltage” means—

- (a) in relation to alternating current, a voltage exceeding 50 volts but not exceeding 1000 volts, in each case measured between the phase conductors taking the square root of the mean of the squares of the instantaneous values of a voltage during a complete cycle; and
- (b) in relation to direct current, a voltage exceeding 120 volts but not exceeding 1500 volts, with any variations of voltage allowed by these Regulations;

“metalwork” does not include any electric line or conductor used for earthing purposes;

“neutral conductor” means a conductor which is, or is intended to be, connected to the neutral point of a system and intended to contribute to the transmission of energy;

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

“phase conductor” means a conductor of a system for the transmission of energy other than a neutral conductor or conductor used for earthing purposes;

“resistance area” means the surface area of ground around an earth electrode on which a significant voltage gradient may exist;

“safety sign” means a sign having the symbol and text and of the design, colours and proportions specified in Schedule 1;

“service line” means an electric line through which energy may be supplied by a supplier from a distributing main but does not include a line directly from the premises of the supplier;

“substation” means any premises or enclosed part thereof which contain apparatus for either transforming or converting energy to or from high voltage (other than transforming or converting solely for the operation of switching devices or instruments) or for switching, controlling or regulating the energy at high voltage and which are large enough to admit the entrance of a person after the apparatus is in position, and includes the apparatus therein;

“supplier” means a person who supplies, and, where electric lines and apparatus used for that purpose are owned otherwise than by the person generating the supply, shall include the owner of those electric lines and apparatus;

“supplier’s works” means electric lines, supports and apparatus of or under the control of a supplier used for the purposes of supply, and cognate expressions shall be construed accordingly;

“supply” means supply with or of energy to premises other than those on which it was generated, and cognate expressions shall be construed accordingly;

“supply neutral conductor” means the neutral conductor of a low voltage system which is or is intended to be connected with earth, but does not include any part of the neutral conductor on the consumer’s side of the supply terminals;

“supply terminals” means the ends of the electric lines situated upon any consumer’s premises at which the supply is delivered and, unless otherwise agreed in writing, where a meter is employed to register the value of the supply and is directly connected to those lines, means the terminals of that meter furthest from the installation of the owner of that meter;

“support” includes stays and struts, but does not include insulators, their fittings or any building or structure the principal purpose of which is not the support of electric lines or apparatus;

“switching device” includes any device which can either make or break a current, or both;

“system” means an individual electrical system in which all the conductors and apparatus are electrically connected to one or more sources of voltage, and includes all those conductors and apparatus.

- (2) Unless the context otherwise requires, any reference in these Regulations to a numbered regulation or Schedule is a reference to the regulation in or the Schedule to these Regulations bearing

that number; and any reference in a regulation or Schedule to a numbered paragraph is a reference to the paragraph of that regulation or Schedule bearing that number.

(3) Words and expressions to which meanings are assigned by these Regulations shall (unless the contrary intention appears) have the same respective meanings in any document issued by the Secretary of State under these Regulations.

## PART II

### CONNECTION WITH EARTH

#### **Continuity of the supply neutral conductor and earthing connections**

4.—(1) The supplier shall, in the design, construction, maintenance and operation of his system, take all reasonable precautions to ensure continuity of the supply neutral conductor.

(2) Except as required by any arrangements made pursuant to regulation 26, no fuse or automatic switching device shall be inserted in any supply neutral conductor.

#### **General requirements for connection with earth**

5.—(1) The supplier shall, in respect of his works, ensure that—

- (a) every high voltage system shall be connected with earth at or as near as is reasonably practicable to the source of voltage in the System:

Provided that where there is more than one source of voltage in the System the connection with earth need only be made at one such point;

- (b) every low voltage supply system shall be connected with earth in accordance with paragraphs (2), (3) and (4);
- (c) so far as is reasonably practicable, no system shall become disconnected from earth in the event of a fault;
- (d) no conductors which respectively connect a supply neutral conductor with earth, and any apparatus used in a high voltage system with earth—
  - (i) shall be interconnected unless the combined resistance to earth does not exceed 1 ohm; or,
  - (ii) shall be connected to separate earth electrodes unless any overlap between the resistance areas of those electrodes is not sufficient to cause danger;

and

- (e) where the high voltage System is connected with earth through a continuously rated arc Suppression coil, an automatic warning shall be given to the supplier of any fault which causes the arc suppression coil to operate.

(2) The supply neutral conductor shall be connected with earth at or as near as is reasonably practicable to the source of voltage and, subject to regulations 6 and 7, no other such connection shall be made:

Provided that where only one consumer is connected to the source of voltage that connection may be at some other point.

(3) Except as required by any arrangements made pursuant to regulation 26, no impedance shall be inserted in any connection with earth of a low voltage system other than that required for the operation of switching devices, instruments, control or telemetering equipment.

(4) The external conductor of any electric line comprising concentric conductors shall be connected with earth.

### **Multiple earthing**

6. The supplier may connect the supply neutral conductor of a distributing main with earth at places in addition to that required by regulation 5(2) if, and only if, the copper equivalent cross-sectional area of the supply neutral conductor—

- (a) when measured anywhere in a three-phase four wire, two-phase three wire or single-phase three wire distributing main is not less than one half of the copper equivalent cross-sectional area of the phase conductor at the same point; or
- (b) when measured anywhere in a single-phase two wire distributing main is not less than the copper equivalent cross-sectional area of the phase conductor at the same point,

and in either case is such that it is capable of carrying such loads as may reasonably be expected to occur.

### **Protective multiple earthing**

7.—(1) The supplier shall not connect or permit the connection of, or continue, a supply to any part of a consumer's installation where the supply neutral conductor is, or is intended to be, used to connect any circuit protective conductor in that part of the consumer's installation with earth unless he is satisfied so far as is reasonably practicable, that—

- (a) his works comply with the requirements of paragraphs (2) or (3) and paragraphs (4) to (6); and
  - (b) the consumer's installation complies with the requirements of paragraphs (7) to (10).
- (a) (2) (a) For the purposes of this paragraph and paragraph (3)—
- (i) measurements shall, where appropriate, be made along the distributing main;
  - (ii) in a distributing main which is divided so that it has more than one end, apart from that at the source of voltage, each such end shall be treated as if it were the only end of that main.

- (b) The supply neutral conductor shall be connected with earth at a point no nearer to the source of voltage than the junction of the distributing main with the service line connecting it with the consumer's installation which both uses the supply neutral conductor as its connection with earth and is the nearest such installation to the end of the distributing main.

- (a) (3) (a) This paragraph applies only where—
  - (i) at least one of the consumer's installations (not exceeding four in total) whose connections to a distributing main lie nearest to the end of the main uses the supply neutral conductor for the purpose of connecting the installation with earth; and
  - (ii) the distance of the furthest of those connections from the end of the distributing main does not exceed 40 metres.

- (b) In any case where this paragraph applies the supply neutral conductor shall be connected with earth at a point no nearer to the source of voltage than the junction between the distributing main and the service line connecting the consumer's installation referred to in sub-paragraph (a) above which is nearest to the source of voltage in the distributing main.

(4) The supply neutral conductor shall be connected with earth at such points as may be necessary to ensure that the resistance to earth of the supply neutral conductor—

- (a) does not anywhere exceed 20 ohms; and

- (b) is such that the fuses or automatic switching devices protecting the high voltage side of any transformer will operate if any fault in it causes the low voltage side to become charged at a higher voltage unless the high voltage side of that transformer is connected with earth through a continuously rated arc suppression coil.
- (5) The supply neutral conductor shall have a copper equivalent cross-sectional area which satisfies the requirements of regulation 6.
- (6) Any connection with earth required by this regulation may be made by connecting the supply neutral conductor to the supply neutral conductor of another distributing main.
- (7) Any metalwork on the consumer's premises which—
- (a) is in, or may reasonably be expected to come into electrical contact with earth;
- and
- (b) is so situated that any person, livestock or domestic animal could simultaneously touch—
- (i) any such metalwork, or any metalwork in electrical contact therewith; and
- (ii) any exposed metalwork forming part of the consumer's installation but not normally carrying an electric current, or any metalwork in electrical contact therewith,
- shall be connected to the earthing terminal.
- (8) Where paragraph (7) applies—
- (a) every circuit protective conductor in the part of the consumer's installation described in paragraph (1) shall be connected to the earthing terminal mentioned in paragraph (7);
- (b) the connection required by paragraph (7) shall be made by means of a bonding conductor attached in such a way as to avoid, so far as is reasonably practicable, electrolytic action at the point of connection; and
- (c) where the bonding conductor is attached to a pipe or metalwork entering a building or Structure that connection shall be made as near to the point of entry as is reasonably practicable for the purpose of avoiding the risk of electric shock.
- (9) The minimum copper equivalent cross-sectional area of any bonding conductor shall not be less than the figure shown in column 2 of the Table set out below in respect of any supply neutral conductor the corresponding copper equivalent cross-sectional area of which is shown in column 1.

Table

Column 1 <i>Copper equivalent cross-sectional area of supply neutral conductor</i>	Column 2 <i>Minimum copper equivalent cross-sectional area of bonding conductor</i>
35 sq mm or less	10 sq mm
over 35 sq mm but not more than 50 sq mm	16 sq mm
over 50 sq mm but not more than 95 sq mm	25 sq mm
over 95 sq mm but not more than 150 sq mm	35 sq mm
over 150 sq mm	50 sq mm

- (10) The supply neutral conductor shall not be connected electrically to any metalwork in any caravan or boat.

### **Earthing of metalwork**

**8.**—(1) Subject to paragraph (2), and without prejudice to any other requirement as to earthing, any metalwork enclosing, supporting or otherwise associated with a supplier's works and which is not intended to serve as a phase conductor shall, where necessary to prevent danger, be connected with earth.

(2) Paragraph (1) shall not apply—

- (a) to any metalwork attached to, or forming part of, a wooden pole support the design and construction of which are such as to prevent, so far as is reasonably practicable, danger within three metres of the ground from any failure of insulation; or
- (b) to any wall-mounted metal bracket carrying an overhead line not connected with earth where the line is both supported by an insulator and the part of the line in contact with the insulator is itself surrounded by insulation.

## **PART III**

### **ELECTRIC LINES BELOW GROUND**

#### **General restriction**

**9.** No supplier shall knowingly supply through electric lines placed below ground (except those in generating stations and substations under the control of the supplier or forming part of a consumer's installation) which do not comply with this Part of these Regulations.

#### **Protective screens**

**10.**—(1) Conductors which are placed below ground and are not connected with earth shall be insulated from earth otherwise than by a support and protected in accordance with paragraph (2).

(2) The protection referred to in paragraph (1) shall comprise—

- (a) in respect of joints or terminations of a conductor in a low voltage system, some form of mechanical protection; and
- (b) in respect of any other part of any conductor, an electrically continuous metallic screen connected with earth,

so placed as to ensure that, so far as is reasonably practicable, any tool or device likely to be used in the vicinity shall make contact with that protection or screen before it can make contact with that conductor.

(3) A supply neutral conductor may be combined in a single device or arrangement with either or both of—

- (a) a metallic screen or armouring;
- (b) other protective material.

#### **Excavations**

**11.**—(1) Every conductor below ground shall be placed at such depth as to avoid, so far as is reasonably practicable, any damage or danger by reason of such uses of the land which can reasonably be expected when the conductor is placed below ground.

(2) In addition to satisfying the requirements of paragraph (1), a conductor below ground used in a supplier's high voltage system but not connected with earth shall be laid in such manner (whether in pipes or ducts or so overlaid at such a distance above the conductor by protective tiles or warning

tape or Some other protective or warning device or otherwise) as to ensure, so far as is reasonably practicable, that any person excavating the ground above the conductor will receive a warning of its presence.

## PART IV

### ELECTRIC LINES PLACED ABOVE GROUND

#### **Restriction on placing electric lines above ground**

**12.** No supplier shall knowingly use any electric lines, wires, cables or supports above ground (except those in a generating station or substation or forming part of a consumer's installation) which do not comply with this Part of these Regulations.

#### **Minimum height of overhead lines, wires and cables**

**13.—(1)** Subject to paragraph (3), the height above ground of any overhead line, or a wire or cable attached to a support carrying any overhead line, at the maximum likely temperature of that line, shall not be less than that specified in this regulation.

(2) In relation to an overhead line used, or intended to be used, at a voltage specified in column 1 of Schedule 2 the height referred to in paragraph (1) shall be—

- (a) at any point where that line is over a road accessible to vehicular traffic, the height specified in column 2 of Schedule 2 as appropriate to that voltage; and
- (b) at any other point, the height specified in column 3 of Schedule 2 as appropriate to that voltage.

(3) This regulation does not apply to any overhead line at a point where it is not over a road accessible to vehicular traffic and which—

- (a) is surrounded by insulation; or
- (b) is not surrounded by insulation and is at least 4.3 metres above ground and connects apparatus mounted on a support to any overhead line; or
- (c) is connected with earth.

(4) The height above ground of any wire or cable which is attached to a support carrying any overhead line shall not, at its likely maximum temperature, be less than 5.8 metres at any point where it is over any road accessible to vehicular traffic.

(5) Every overhead line shall be so placed that it shall not, so far as is reasonably practicable, come so close to any building, tree or structure as to cause danger.

#### **Position, insulation and protection of electric lines**

**14.—(1)** For the purposes of this regulation an electric line placed above ground which is connected to any source of voltage shall be considered to be ordinarily accessible if and so long as it may be reached by hand from any scaffolding, ladder or other construction erected or placed on, in, against or near to a building or structure, but shall not be considered to be so accessible during such reasonable period during and after the erection or placing as may be necessary to arrange for the protection of that line if that was the purpose, or part of the purpose, of the erection or placing.

(2) Any part of an electric line placed above ground which is not connected with earth and which is not ordinarily accessible shall be insulated.

(3) Any part of an electric line placed above ground which is not connected with earth and which is ordinarily accessible shall be—



- (a) made dead; or
- (b) so insulated that it is protected, so far as is reasonably practicable, against mechanical damage or interference; or
- (c) adequately protected to prevent danger.

(4) Any bare low voltage electric line placed above ground which is not connected with earth shall be situated, throughout its length, vertically above a bare electric line which is connected with earth.

(5) Nothing in this regulation shall require the supplier to insulate or protect any part of any electric line placed above ground which, but for the provisions of paragraph (1), would not be required to be insulated or protected unless—

- (a) he has been given reasonable notice of the erection of the building or structure which would cause that line to become accessible; and
- (b) unless otherwise agreed, the person responsible for the erection of that building or Structure which would cause that line to become accessible Shall have paid, or undertaken to pay, the reasonable cost of the insulation of the line.

(6) Nothing in this regulation shall be taken to allow the application of temporary insulation to any electric line other than a low voltage line.

#### **Precautions against access**

**15.**—(1) Every support carrying a high voltage overhead line shall, if the circumstances reasonably require, be fitted with devices to prevent, so far as is reasonably practicable, any unauthorised person from reaching a position at which any such line would be a source of danger.

(2) The supplier shall attach and keep attached safety signs to supports carrying a high voltage overhead line of such size and placed in such positions as are necessary to give due warning of danger in all the circumstances.

#### **Insulators in stay wires**

**16.** Every stay wire which forms part of or is attached to any support carrying a bare live electric line shall be fitted with an insulator no part of which shall be less than 3 metres above ground or above the normal height of any such line attached to that support.

## **PART V**

### **SUPPLIER'S WORKS**

#### **Sufficiency of supplier's works**

**17.** All supplier's works shall be sufficient for the purposes for, and the circumstances in, which they are used and so constructed, installed, protected (both electrically and mechanically), used, and maintained as to prevent danger or interruption of supply so far as is reasonably practicable.

#### **Maximum voltage**

**18.** No electric line shall be used for the purpose of supply at a voltage greater than 440,000 volts.

### **Enclosed spaces**

**19.** The supplier shall take precautions to prevent, so far as is reasonably practicable, danger due to the influx of water or any noxious or explosive liquid or gas into any enclosed space containing his works.

### **High voltage: additional provisions**

**20.**—(1) Paragraphs (2) and (3) shall apply only to supplier's works where energy at high voltage is generated, transformed, converted, regulated, switched or controlled.

(2) The supplier shall—

- (a) enclose any part of a substation in the open air, containing live apparatus which is not encased, by a fence not less than 2.4 metres high to prevent, so far as is reasonably practicable, danger or unauthorised access;
- (b) ensure that, So far as is reasonably practicable, there are at all times displayed in a conspicuous position—
  - (i) subject to paragraph (3), a safety sign and a notice giving the name of the supplier and an address or telephone number where a person appointed by the supplier will be in constant attendance, and
  - (ii) such other signs as may be necessary to give warning of danger having regard, inter alia, to the siting of, the nature of, and the measures taken to ensure the physical security of, the supplier's works; and
- (c) take all reasonable precautions to minimise the risk of fire.

(3) The provisions of paragraph (2)(b)(i) shall not apply to any exposed live parts of the supplier's works which are held at least 4.3 metres above ground by a support, or to any insulated electric line attached to that support.

### **Protective measures**

**21.** The supplier shall apply protective devices to every system which will, so far as is reasonably practicable, prevent any current, including leakage to earth, from flowing in any part of a system for such a period that that part of the system can no longer carry that current without danger.

### **Precautions against excess voltage**

**22.** The supplier shall make arrangements which ensure, so far as is reasonably practicable, that—

- (a) every low voltage electric line shall be protected against danger arising from accidental contact with or leakage from any high voltage electric line; and
- (b) where energy at a higher voltage is transformed no danger shall be caused as a result of a system at a lower voltage becoming charged above its normal voltage by leakage from or contact with the supplier's system at the higher voltage.

### **Precautions against supply failure**

**23.**—(1) The supplier's works shall be so arranged, and provided where necessary with fusible cut-outs or automatic switching devices so located as to restrict, so far as is reasonably practicable, the number of consumers affected by any fault in the supplier's works.

(2) The supplier shall at all times take all reasonably practicable steps to avoid interruptions of supply resulting from his own acts.

### **Inspection of supplier's works**

24. The supplier shall take all reasonably practicable steps to inspect his installations and works to ensure compliance with these Regulations.

## **PART VI**

### **SUPPLY TO CONSUMER'S INSTALLATIONS**

#### **Supplier's works on consumer's premises**

25.—(1) The supplier shall ensure that all his works on a consumer's premises which are not under the control of the consumer (whether forming part of the consumer's installation or not) are—

- (a) suitable for their respective purposes;
- (b) installed and, so far as is reasonably practicable, maintained so as to prevent danger: and
- (c) protected, so far as is reasonably practicable, by a suitable fusible cut-out or automatic switching device as close as reasonably practicable to the supply terminals.

Provided that no such fusible cut-out or automatic switching device shall be inserted in any conductor connected with earth.

(2) The standard of construction and installation to be adopted in complying with paragraph (1) shall not be lower than that imposed by regulation 27.

(3) Every cut-out or automatic switching device mentioned in paragraph (1)(c) on premises not under the supplier's control shall be enclosed in a locked or sealed container.

(4) Any electric line which forms part of the supplier's works and which is taken into a building at a point below the level of the ground shall be so installed as to prevent, so far as is reasonably practicable, the influx of any noxious or explosive liquid or gas at the point of entry.

(5) The supplier shall mark permanently the separate conductors of electric lines connected to supply terminals as close as practicable to those terminals to show the polarity of each conductor and, where appropriate, phase rotation.

#### **Interconnected supplies**

26. No person shall knowingly provide energy to his own or any consumer's installation or allow any electric lines in his ownership or under his control to be used for that purpose if that installation may also be supplied from an alternative source of energy unless he satisfies the requirements of Part I or Part II of Schedule 3.

#### **General conditions as to consumers**

27.—(1) No supplier shall be compelled to commence or, subject to regulation 28, to continue to give a supply to any consumer unless he is reasonably satisfied that each part of the consumer's installation is so constructed, installed, protected and used, so far as is reasonably practicable, as to prevent danger and not to cause undue interference with the supplier's system or with the supply to others.

(2) Any consumer's installation which complies with the provisions of the Institution of Electrical Engineers Regulations shall be deemed to comply with the requirements of this regulation as to safety.

### **Discontinuance of supply in certain circumstances**

**28.**—(1) Where a supplier, after making such examination as the circumstances permit, has reasonable grounds for supposing that a consumer's installation or any part of it, including any supplier's works situated on the consumer's side of the supply terminals, fails to fulfil any relevant requirement of regulation 27, paragraphs (2) to (7) shall apply.

(2) Where, in an emergency, the supplier is satisfied that immediate action is justified in the interests of safety, he may without prior notice discontinue the supply to the consumer's installation and notice in writing of the disconnection and the reasons for it shall be given to the consumer as soon as is reasonably practicable.

(3) Subject to paragraph (2), the supplier may, by notice in writing specifying the grounds, require the consumer within such reasonable time as the notice shall specify to comply with one or both of the following—

- (a) to permit a person duly authorised by the supplier in writing to inspect and test the consumer's installation or any part of it at a reasonable time;
- (b) to take, or desist from, such action as may be necessary to correct or avoid undue interference with the supplier's supply or apparatus or with the supply to, or the apparatus of, other consumers.

(4) In any of the circumstances specified in paragraph (5) the supplier may, on the expiry of the period specified in the notice referred to in paragraph (3), discontinue the supply to the consumer's installation and shall give immediate notice in writing to the consumer of the discontinuance.

(5) The circumstances referred to in paragraph (4) are—

- (a) that, after service of a notice under paragraph (3)(a), the consumer does not give facilities for inspection or testing; or
- (b) in any Other case—
  - (i) after any such test or inspection the person authorised makes a report confirming that the consumer's installation (or any part of it) fails to fulfil any relevant requirement of regulation 27; or
  - (ii) the consumer fails to show to the reasonable satisfaction of the supplier within the period so required that the matter complained of has been remedied or is the responsibility of the supplier.

(6) Any difference between the consumer and the supplier in relation to the grounds or the period specified in any notice of the kind mentioned in paragraph (3)(b) shall be determined in the manner provided by regulation 29.

(7) The supplier shall not discontinue the supply in pursuance of paragraph (4) pending the determination of any difference of the kind mentioned in paragraph (6), and shall not discontinue the supply to the whole of the consumer's installation where it is reasonable to disconnect only a portion of that installation in respect of which complaint is made.

(8) Where in pursuance of this regulation a supplier has disconnected the supply to a consumer's installation (or any part of it) the supplier shall not recommence the supply unless—

- (a) he is satisfied in respect of the consumer's installation that the relevant requirements of regulation 27 have been fulfilled; or
- (b) it has been determined in the manner provided by regulation 29 that the supplier is not entitled under regulation 27 to decline to recommence the supply,

and if he is so satisfied or it is so determined, the supplier shall forthwith recommence the supply.

### **Notices and determination of differences**

**29.**—(1) In any case where the supplier in pursuance of these Regulations declines—

- (a) to connect a consumer's installation or any part of it with his electric lines; or
- (b) to commence or continue a supply to a consumer; or
- (c) to recommence the supply to a consumer after it has been discontinued,

then, subject to paragraph (2), any difference which arises between the consumer and the supplier shall be determined by a person appointed by the Secretary of State on the application of the consumer or the supplier and such person may make a direction as to whether the costs of such determination (including any fees or expenses payable to him) shall be borne by the supplier or the consumer.

(2) A person appointed under paragraph (1) shall not determine that the supplier was or is entitled under regulations 27 and 28 to refuse a supply to that installation if the appointed person is satisfied that—

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

(3) A copy of this regulation and regulation 28 shall be endorsed upon or accompany every notice given by the supplier to a consumer pursuant to this Part of these Regulations.

(4) In any case where in pursuance of these Regulations, an Electricity Board refuses to commence a supply to a consumer or to connect permanently a consumer's installation with its electric lines, it shall as soon as practicable give notice in writing of its refusal specifying the matter complained of, and any difference which may arise between the consumer and the Electricity Board in regard to the matters specified in the notice, or as to any period specified for remedying the same in any such notice, shall be determined in the manner provided in this regulation.

### **Declaration of phases, frequency and voltage at supply terminals**

**30.**—(1) Before commencing to give a supply to a consumer, the supplier shall declare to the consumer—

- (a) the number and rotation of phases;
- (b) the frequency; and
- (c) the voltage,

at which it proposes to deliver the supply and the extent of the permitted variations of those values:

Provided that, unless otherwise agreed between the supplier and the consumer, the frequency to be declared shall be 50 hertz and the voltage to be declared in respect of a low voltage supply shall be 240 volts between the phase and neutral conductors at the supply terminals.

(2) For the purposes of this regulation, and unless otherwise agreed by the consumer, the permitted variations are—

- (a) a variation not exceeding one per cent above or below the declared frequency; and
- (b) a variation not exceeding six per cent above or below the declared voltage at that frequency where that voltage is below 132 kV, and not exceeding 10 per cent above or below the declared voltage where that voltage is 132 kV or above,

or the variation which may have been authorised by the Secretary of State under paragraph (3).

(3) The Secretary of State may, on application by a supplier, authorise him to alter any of the declared values or any permitted variation if he gives such notice of his application as the Secretary of State may require.

(4) The supplier shall forthwith give notice of any authorisation under paragraph (3) to every consumer to whose supply it may apply.

(5) The supplier shall ensure that, save in exceptional circumstances, any supply he gives complies with the declaration under paragraph (1).

(6) The polarity of direct current and the number and rotation of phases in any supply shall not be varied without the agreement of the consumer or, in the absence of such agreement, the consent of the Secretary of State who may impose such conditions, if any, as he thinks appropriate.

### **Information to be provided on request**

**31.** The supplier shall provide in respect of the existing or proposed installation of a consumer at low voltage a written statement of—

- (a) the maximum prospective short circuit current at the supply terminals; and
- (b) the maximum earth loop impedance of the earth fault path outside the consumer's installation; and
- (c) the type and rating of the supplier's fusible cut-out or switching device nearest to the supply terminals,

which apply, or will apply, to that installation to any person who can show reasonable cause for requiring that information.

### **Electricity Boards to provide constant supply**

**32.** From the time when any Electricity Board begins to supply it shall, unless otherwise agreed with the consumer, maintain the supply:

Provided that—

- (a) for the purposes of testing or for any other purpose connected with the discharge of the Board's functions; or
- (b) in case of an inevitable accident or force majeure affecting or liable to affect the proper maintenance of the supply,

the supply may be discontinued by the Board for such period as may be necessary but no longer, subject (except in a case of an inevitable accident or force majeure) to not less than two days notice being given by the Board to all consumers likely to be affected by the discontinuance.

## **PART VII**

### **MISCELLANEOUS**

#### **Inspections, etc. for the Secretary of State**

**33.—**(1) For the purpose of ascertaining whether a breach of these Regulations may have occurred, a person duly authorised by the Secretary of State shall be entitled at all times to inspect and to make examinations and tests of a supplier's works and to examine and take records of the readings of any instruments used by the supplier.

(2) The supplier shall afford reasonable facilities for any such inspection, examination or test, but shall not be responsible for any interruption in the supply which may be occasioned thereby.

### **Notification of specified events**

**34.—**(1) Every supplier shall give to the Secretary of State notice in accordance with paragraph (3) in respect of any event specified in paragraph (2), whether or not that event was caused accidentally.

(2) The events referred to in paragraph (1) are—

- (a) any event attributable in whole or in part to the generation, transformation, control, distribution or supply of energy up to and including the supply terminals which has given rise to—
  - (i) the death of any person other than a person engaged by the supplier for the purposes of his business;
  - (ii) an injury (including any electric shock)  
to any person other than a person engaged by the supplier for the purposes of his business;
  - (iii) any fire; or
  - (iv) any explosion or implosion;
- (b) any event attributable in whole or in part to the presence of energy on the consumer's side of the supply terminals on any non-industrial and non-commercial premises resulting in the death of any person;
- (c) any event, whether or not accompanied by an event specified in sub-paragraph (a) above, which caused an overhead line to be at a height less than that required by regulation 13(2);
- (d) the occurrence of any damage to any underground electric line of the supplier resulting from an event not specified in sub-paragraphs (a) and (b) above; and
- (e) any event other than those listed in sub-paragraphs (a), (c) or (d) above which, taking into account the circumstances of that event, was likely to cause any of the events listed in sub-paragraph (a).

(3) The notice shall be in writing and—

- (a) in respect of the events specified in paragraphs (2)(a) and (b)—
  - (i) shall be sent to the Secretary of State by the quickest practicable means after the event becomes known to the supplier; and
  - (ii) shall contain the particulars specified in Parts I and II respectively of Schedule 4;
- (b) in respect of the events notifiable under paragraphs (2)(c) and (e)—
  - (i) shall be sent to the Secretary of State by means of a return to be submitted within 15 days of the end of the month in which the event became known to the supplier; and
  - (ii) in respect of an event specified in paragraph (2)(c)  
shall contain the particulars specified in Part III of Schedule 4; and
  - (iii) in respect of an event specified in paragraph (2)(e)  
shall contain the particulars specified in whichever of Parts I, II and III Of Schedule 4 is most appropriate to the circumstances;
- (c) in respect of the events notifiable under paragraph (2)(d)—
  - (i) shall be sent to the Secretary of State by means of a return to be submitted within one month of the period of 3 months ending on 31st March, 30th June, 30th September or

31st December as the case may be, in which the event became known to the supplier;  
and

(ii) shall contain the particulars specified in Part IV of Schedule 4; and

(d) shall, in every case, indicate by a unique and sequential reference number, in respect of each year ending on 31st March, the number of that report.

(4) Notices in respect of any event specified in paragraph (2)(a), (b), (c) or (e) shall be sent to the Secretary of State notwithstanding that the supplier is unable to give the full particulars required by Parts I, II or III of Schedule 4 and any particulars omitted shall be sent by the supplier in a supplementary notice to the Secretary of State by the earliest practicable means after they become known to the supplier.

(5) Without prejudice to paragraph (3), the supplier shall give notice to the Secretary of State by telephone, telex or other immediate means of communication of any death reportable under paragraph (2)(a)(i) immediately the event becomes known to the supplier.

### **Notification of supply failure**

**35.**—(1) Every supplier shall send to the Secretary of State notice in accordance with paragraph (2) of failures of supply of which two days prior notice has not been given where there has been—

- (a) any single interruption of supply to one or more consumers of 20 megawatts or more for a period of one minute or longer; or
- (b) any single interruption of supply to one or more consumers of 5 megawatts or more for a period of one hour or longer; or
- (c) any single interruption of supply to 5,000 or more consumers for a period of one hour or longer.

(2) The notice shall—

- (a) be sent by the earliest practicable means after the failure becomes known to the supplier;
- (b) contain the particulars specified in Schedule 5.

(3) The notice shall be sent to the Secretary of State notwithstanding that the supplier is unable to give the full particulars required by Schedule 5 and any particulars omitted shall be sent by the supplier in a supplementary notice to the Secretary of State by the earliest practicable means after they became known to the supplier.

### **Maps of supplier's works underground**

**36.**—(1) This regulation applies in respect of supplier's works placed below ground other than works placed in land under the control of the supplier.

(2) Subject to paragraph (6), every supplier shall cause to be made and, so far as is reasonably practicable, kept up to date, a map or series of maps indicating the position and depth below surface level of all his works.

(3) The supplier shall make a copy of the whole or the relevant part of any map prepared for the purpose of paragraph (2) available for inspection by any of—

- (a) the Secretary of State;
- (b) the local planning authority for the area where the supplier's works in the map are situated; and
- (c) any other person who can show reasonable cause for requiring to inspect any part of the map,



and shall, on request, provide a copy of such map or part of the map free of charge.

(4) Where the supplier is not an Electricity Board and has prepared a map for the purposes of paragraph (2) he shall provide, free of charge, to every Electricity Board a copy of that part of the map which relates to the area of that Electricity Board.

(5) Any map prepared for the purposes of paragraph (2) may be prepared and retained by electronic means provided that that means has the capability of reproducing such map in printed form.

(6) Nothing in this regulation shall require the inclusion on a map prepared for the purposes of paragraph (2) of information relating to the position and depth below surface level of supplier's works which were placed below ground before the coming into force of this regulation where it would not be reasonably practicable to obtain such information.

### **Exemption from requirements of Regulations**

**37.**—(1) Where a request is made to the Secretary of State to grant an exemption from a requirement of these Regulations, that request shall be made in writing and shall state the full extent of the reasons for the exemption sought.

(2) Where the Secretary of State is satisfied that an exemption may be granted without prejudice to safety or interference with the supply to others, the Secretary of State may grant such an exemption as he thinks appropriate.

### **Works in breach of Regulations**

**38.**—(1) Paragraphs (2) to (10) shall apply in any case where the Secretary of State is satisfied that—

- (a) any supplier's works or any part thereof which are constructed, placed, erected, maintained, or used otherwise than in accordance with these Regulations; or
- (b) any part of a consumer's installation which is not enclosed in a building; or
- (c) those works, that installation or the part thereof which are or is in breach of any relevant exemption or other relevant provision made under these Regulations in force at the time when the notice referred to in paragraph (2) is given,

are or is liable to

- (i) become a source of danger to others; or
- (ii) interfere with a supply to others.

(2) The Secretary of State may serve notice in writing on the supplier or consumer specifying the matter of which he is satisfied and require that those works, that installation or the part specified in the notice—

- (a) shall not be used, or shall be used only subject to compliance with such conditions as that notice may specify; or
- (b) shall be made dead; or
- (c) shall be removed,

within the time specified in that notice and the person on whom that notice is served shall comply with the provisions of that notice.

(3) Where such a notice has required that any works, installation or part shall not be used or shall be made dead that notice shall remain in effect until such time as the works, installation or part specified in the notice shall comply with these Regulations or until the Secretary of State shall withdraw the notice.

(4) If, within the period specified by that notice for compliance or such longer period as the Secretary of State may allow, the person on whom the notice is served disputes the basis for, or the requirements of, any such notice, he may give notice in writing to the Secretary of State of that dispute and shall state the grounds.

(5) Where a notice is given to the Secretary of State pursuant to paragraph (4), the Secretary of State shall refer the dispute to an independent person agreed between the Secretary of State and the person giving the notice, or in default of agreement, to a person nominated by the President for the time being of the Institution of Electrical Engineers.

(6) The person to whom a dispute is referred shall, on reaching a determination of the dispute, make a direction as to whether the person giving the notice under paragraph (4) shall bear the costs of the reference (including any fees or expenses payable to him) or whether those costs shall be borne by the Secretary of State.

(7) The person to whom a dispute is referred may decide

(a) to uphold the notice; or

(b) to recommend to the Secretary of State that the notice be withdrawn or modified, and

shall notify his decision in writing to the Secretary of State and to the person giving notice under paragraph (4).

(8) The person to whom a dispute is referred may and, if so requested by any party to the dispute, shall—

(a) give the parties to the dispute an opportunity of appearing before and being heard by him; and

(b) make an inspection of the supplier's works, or consumer's installation the subject of the dispute.

(9) Where it appears to the person to whom a dispute is referred that any person, not being a party to the dispute, has an interest in the outcome of that dispute, he may at his discretion treat that person as if he were a party to the dispute.

(10) A copy of this regulation shall be endorsed upon or accompany every notice served by the Secretary of State pursuant to this regulation.

### **Offences**

**39.** Any supplier who fails to comply with any provision of these Regulations, any person who fails to comply with regulation 26 and any consumer who fails to comply with regulation 38 shall be guilty of an offence under section 16 of the Energy Act 1983.

Dated 16th June 1988

*Cecil Parkinson*  
Secretary of State for Energy

Dated 16th June 1988

*Malcolm Rifkind*  
Secretary of State for Scotland