ELECTRICITY COMMISSION

# ELECTRICITY SUPPLY REGULATIONS, 1937

Explanatory Notes on the Electricity Supply Regulations, 1937, prepared by the Electricity Commissioners



LONDON HER MAJESTY'S STATIONERY OFFICE

# PREFACE

The accompanying Explanatory Notes on the Electricity Supply Regulations, 1937, have been prepared by the Electricity Commissioners for the information and assistance of Authorised Undertakers and others who are subject to or concerned with the provisions thereof.

While the Notes indicate the intentions of the Electricity Commissioners as regards the scope of various provisions, it is necessary to emphasise that they do not purport to give a legal interpretation of any of the Regulations, as that is a matter for the Courts.

Electricity Commission, Savoy Courts, Strand, W.C.2.

December, 1936.



## **Explanatory Notes**

## on the

# **Electricity Supply Regulations, 1937**

The Electricity Supply Regulations, 1937, represent, broadly speaking, a re-issue of the prior consolidated Code of Regulations of the Electricity Commissioners, namely the Electricity Supply Regulations, 1934, with certain modifications, more particularly as regards their retrospective application.

The Regulations of 1934 came into force as from 15th January, 1934, in relation to all works brought into use and all supplies of energy commenced by authorised undertakers on and after that date; and contained provision whereby they were also to become applicable to all prior works and all prior supplies on and after 1st January, 1935, in lieu of all prior Regulations.

As indicated in their Annual Reports, the Electricity Commissioners received representations for the amendment of the retrospective and certain other provisions in the Regulations of 1934, and decided to re-issue the Regulations in a modified form. Pending the settlement of the modifications, the application of the Regulations of 1934 to prior works and prior supplies was postponed until 1st January, 1936, and subsequently until 1st January, 1937.

The Electricity Supply Regulations, 1937, come into force as from 1st January, 1937 (the prescribed date); and as from that date all prior Regulations, including the Regulations of 1934, cease to have effect and are revoked without prejudice to anything done or suffered thereunder, subject to certain qualifications which are referred to later in these Notes.

## Definitions

The words and expressions which are defined in the Electricity Supply Regulations, 1937, for the purposes thereof are for the most part taken or adapted from the Electricity (Supply) Acts, 1882 to 1936, including the Schedule to the Electric Lighting (Clauses) Act, 1899, and from the Board of Trade Regulations of 1909 as adopted by the Electricity Commissioners in 1920 and the Electricity Supply Regulations, 1934.

Appendix "A" to these Explanatory Notes indicates the particular Acts or prior Regulations from which the various words and expressions have been taken or adapted; and also draws attention to modifications which have been made either in the expressions themselves or in the definitions used in the new Regulations.

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#### Short Title and Application of Regulations

There are two underlying features of the Electricity Supply Regulations, 1937, namely:-

- (i) their general application, as a consolidated Standard Code, to all authorised undertakers and undertakings and to all works and supplies of energy whether brought into use or commenced before or after the prescribed date (1st January, 1937); and
- (ii) the displacement (by revocation) of all prior Regulations (other than those relating to Overhead Lines) as from the prescribed date.

These features are subject in each case to certain qualifications, to which reference is made below.

With regard to the application of the new Regulations to existing works and to supplies which are being given at the prescribed date, provision is made----

- (a) excepting certain of the Regulations from application to such works and supplies (see paragraph 2 (a) (i) of the Short Title, etc.);
- (b) limiting the extent to which certain other Regulations are to apply to such works and supplies (see paragraph 2 (a) (ii) of the Short Title, etc.); and
- (c) suspending for a period of two years the application of other Regulations to existing works and existing supplies (See paragraph 2 (a) (iii) of the Short Title, etc.), so as to afford the Undertakers concerned a reasonable opportunity of carrying out or making any necessary alterations or arrangements to bring the works or supplies into compliance or conformity with the new Regulations.

In the case of the Regulations whose application is suspended, namely Regulations 9(a) (ii) and (iii), 10(b), 16(b), 19, 22, 23 and 31, it will be observed that, unless otherwise prescribed by the Electricity Commissioners in particular cases, the existing works and supplies concerned *continue* to be subject for the time being to the provisions of any corresponding prior Regulations which were applicable thereto before 1st January, 1937, until brought into compliance or conformity with the new Regulations, which must be done by 1st January, 1939.

Subject to the preceding qualifications, other existing works or existing supplies must be brought into compliance or be given in conformity with the provisions of the new Regulations as soon as practicable after the prescribed date.

With regard to the *revocation* of all prior Regulations (as defined) without prejudice to anything done or suffered thereunder, it will be observed that provision is made in the first proviso to paragraph 3 of the Short Title, etc., for deferring in individual cases the revocation of such prior Regulations as continue to apply to existing works and existing supplies during the period while certain of the Regulations of 1937 are suspended from application thereto. The intention of the second proviso to paragraph 3 is to preserve the rights and obligations of the Undertakers in relation to consumers or other bodies under consents to or approvals of operations of a continuing character which have been given under prior Regulations and have not been fully exercised. For example, there are cases where Undertakers in virtue of such consents are in process of changing over the type of current or the voltages declared to consumers and have not yet completed the whole of the change-over authorised by the consents.

#### **General Scope of Regulations**

The Regulations are divisible into two main groups concerned respectively with-

- (a) the electric lines and works of the Undertakers (Regulations I to 2I inclusive); and
- (b) the supply of energy to consumers and consumers installations (Regulations 22 to 35 inclusive).

There are also certain additional Regulations of a miscellaneous character (Regulations 36 to 39 inclusive).

#### Electric Lines and Works of the Undertakers

#### (Regulations 1 to 21 inclusive)

With regard to the Regulations falling into the first main group, brief comment may be made on the provisions of the undermentioned.

#### **Regulations 1 and 6.** (Test for resistance of insulation.)

These two Regulations are concerned with the testing of the insulation of electric lines for use at low and medium voltage (Regulation 1), and of electric lines and apparatus for use at high voltage (Regulation 6) before such lines and apparatus are actually brought into use by the Undertakers for the purposes of the supply of energy.

The Regulations are intended to ensure that the electric lines and apparatus shall be subjected to certain tests *after* they have been placed in position but *before* final jointing to or connection with a live system and before they are brought into use, although tests were carried out *prior to* the electric lines or apparatus being placed in position (for example while they were at the manufacturers works).

Regulation 1 does not apply to overhead lines unless the Electricity Commissioners otherwise prescribe in any particular case. With regard to this qualification, it should be noted that insulated cables are sometimes placed above ground in the open air (Sec Note on definition of "Overhead lines" on page 15).

Regulation 6 is not excepted from application to overhead lines.

#### Regulations 4 and 8. (Connection with earth.)

By Section 10 (c) of the Schedule to the Electric Lighting (Clauses) Act, 1899, it is provided in effect that the Undertakers shall *not* permit any part of any circuit to be connected with earth *except* in the following circumstances:—

- (i) So far as may be necessary for carrying out the provisions of Regulations made under the Electricity (Supply) Acts; and
- (ii) In virtue of an approval of the Electricity Commissioners with the concurrence of the Postmaster-General, and in accordance with the conditions, if any, of that approval.

Regulations 4 and 8 prescribe the circumstances in which and conditions under which it is necessary for the Undertakers to connect with earth certain systems for use at low and medium voltage (Regulation 4), and systems for use at high voltage (Regulation 8); and with the concurrence of the Postmaster-General, the Electricity Commissioners have extended these two Regulations so as to permit of certain kinds of multiple earthing, including that involved in giving a supply from an earthed system to an electrode boiler which is also connected with carth, subject to specified conditions.

The attention of Undertakers is specially directed to the conditions which place them under obligation to serve prior notice on the Postmaster-General giving certain particulars and also stating the location of all the points of earthing concerned in any multiple earthing carried out under these Regulations. The Electricity Commissioners have ascertained that such notices may be served on the Post Office Sectional Engineer, or, where there is no Sectional Engineer, on the Telephone Manager.

Any multiple earthing other than that permitted by these two Regulations will necessitate the approval of the Electricity Commissioners and the concurrence of the Postmaster-General; and the Undertakers will accordingly have to make individual applications to the Electricity Commissioners for any desired approvals.

Attention is drawn to the new proviso to paragraph (vi) of Regulation 4. Since the issue of the Electricity Supply Regulations, 1934, and as indicated in their Annual Reports, the Electricity Commissioners have dealt with a number of applications for consent to a modification of the requirements of paragraph (e) of Regulation 4 thereof (corresponding to the above-mentioned paragraph (vi)) to permit of the insertion of the secondary winding of a high frequency transformer in the connection with earth of an alternating current distribution system for the purpose of the remote control of switches for street lighting. The new proviso embodies the conditions which the Electricity Commissioners attached to their consents in a number of cases, and the object of the proviso is to obviate individual applications in the future.

Regulation 7. (Electric lines to be metal sheathed: Precautions against excess leakage.)

This Regulation, the form of which has been revised, is intended to relate more particularly to cable systems for use at high voltage, and does not apply to overhead lines unless the Electricity Commissioners otherwise prescribe in any particular case. With regard to this qualification, it should be noted that high voltage insulated cables are sometimes placed above ground in the open air (See Note on definition of "Overhead lines" on page 15).

#### Regulation 9. (General conditions as to transformation, control, etc.)

The Electricity Commissioners are advised that a substation under a street is a street box within the meaning of the Electricity (Supply) Acts. In consequence of the words in brackets in paragraph (a) (iii) of Regulation 9, the provisions of that paragraph do *not* extend to any underground street box which by reason of its size and contents would be a substation as defined in the Regulations.

#### **Regulation 12.** (Standard of construction of electric lines.)

While this Regulation does not preclude the Undertakers from installing electric lines which do not conform in all respects to British Standard Specifications, the standard of construction of the said electric lines must not be lower than that prescribed in such Specifications unless the Electricity Commissioners otherwise allow in any particular case.

#### **Regulation 13.** (Protection against excess energy.)

This Regulation has been amended to make it clear that it does not require the insertion in a service line from a distributing main of a fusible cut-out or automatic circuit-breaker apart from that required by Regulation 24 (Protection of consumers installations against excess energy).

#### **Regulation 14.** (Precautions against metal work becoming electrically charged.)

This Regulation, the form of which has been revised, is *excepted* from application to overhead lines. The Overhead Line Regulations of the Electricity Commissioners makes provision for precautions to be taken in cases where line conductors cross over or under or are in proximity to other overhead wires; and in the case of high voltage overhead lines for all metal work other than conductors to be connected with earth.

#### **Regulation 15.** (Overhead lines.)

In addition to those Regulations which are expressly excluded from application to overhead lines (for example Regulation 1), there are other Regulations which by their nature do not extend to overhead lines (for example Regulation 19).

#### **Regulation 17.** (Bituminous, etc., insulation or protection.)

With regard to paragraph (b) of this Regulation, a prohibition against the bringing into use of any further mains insulated with bitumen or composition of a bituminous character has been in force since June, 1931, when a general Regulation dealing with this matter was made by the Electricity Commissioners as the outcome of an Inquiry into an explosion which occurred in connection with a main of that type. Regulation 21. (Precautions against failures of supply, etc.; Notice of failures.)

Attention is drawn to the new provisions contained in paragraph (b) of Regulation 21 placing an obligation upon the Undertakers to take all reasonable precautions during and in connection with constructional and maintenance work so as to avoid accidental interruptions of supply and also to avoid danger to the public or to any employees or authorised persons engaged on operations which do not come within the scope of the Home Office Electricity Regulations.

The notice to be given by the Undertakers to the Electricity Commissioners of failures of supply is to be in such form and to contain such particulars as the Commissioners may from time to time prescribe. If and when the Commissioners decide to modify the form at present prescribed, as set out in Appendix "B", due notification of the modifications will be given to all Undertakers.

## Supply to Premises of Consumers: Consumers Installations

## (Regulations 22 to 35 inclusive)

An important feature of the second main group of Regulations (which are broadly in accord with a corresponding group in the Electricity Supply Regulations, 1934) is the general relationship laid down as between the Undertakers and consumers of electricity.

The Regulations provide that the Undertakers shall not be compelled to commence, or subject to the provisions of Regulation 32 (Discontinuance of supply in certain circumstances) to continue to give, a supply of energy to any consumer unless they are reasonably satisfied as to the suitability and condition of the consumer's installation, e.g. that the conductors and apparatus are sufficient in size and power for the purposes for which the supply is to be used, and are constructed, installed and protected so as to prevent danger as far as reasonably practicable.

The Regulations also accord official recognition to the Regulations for the Electrical Equipment of Buildings (Tenth Edition, September, 1934) issued by the Institution of Electrical Engineers by providing that consumers installations which comply with the provisions of the Institution of Electrical Engineers Regulations (as defined) shall be deemed to fulfil the requirements of Regulations 27, 28 and 29, as the case may be, as regards the suitability and condition of the installations.

It is important to emphasise that the Regulations of 1937 (as was indicated by the Electricity Commissioners in their Fourteenth Annual Report for the year ending 31st March, 1934, when commenting upon the analogous provisions in the Electricity Supply Regulations, 1934) do not provide as an essential requirement that a consumers installation must comply with the Institution of Electrical Engineers Regulations. Neither do they entitle the Undertakers, in the absence of other adequate reasons, to decline to connect or give a supply to a consumers installation merely on the ground that the installation embodies materials, methods of wiring or appliances other than those specified in the Institution of Electrical Engineers Regulations.

The reasons for so declining must be stated in writing by the Undertakers to the consumer, as provided for by Regulation 33 (a); and it is then open to the consumer or his authorised agent in the event of disagreement with the reasons stated by the Undertakers, to have the matter determined in manner provided for by Regulation 33, namely, by an Inspector nominated by the Electricity Commissioners, with a further right of appeal to the Electricity Commissioners.

While the Regulations thus enable all Undertakers to accept the provisions embodied in the Institution of Electrical Engineers Regulations as a standard for consumers installations, they do *not* prescribe those provisions as an absolute standard from which no departure is permissible. At the same time the Regulations enable consumers effectively to resist any demand by the Undertakers for a standard of installation in excess of the provisions of the Institution Regulations.

It should be noted that the Regulations do not apply in respect of the supply of energy to any consumer's installation to which the Home Office Electricity Regulations or the Mines Department Electricity Regulations apply.

Special consideration was given by the Electricity Commissioners to the bearing of Regulations 27 to 30 (inclusive) in relation to the supply of electricity to existing installations.

Owing to developments in technical practice, many existing installations may not be in accord in all respects with the generally accepted standards of construction or installation now current. On the other hand, it appeared to the Electricity Commissioners that unnecessary expense and inconvenience would be caused if an existing supply of electricity to such an installation could be discontinued, or if a new supply to such an installation could be refused in the event of the present occupier leaving the premises and a new consumer coming into occupation, merely on the grounds that the installation was not fully in conformity with current technical practice and irrespective of whether it was otherwise functioning satisfactorily without risk of danger.

With the view of obviating such a condition of affairs, the Electricity Commissioners have included in Regulation 33 (Notices by Undertakers: Procedure as to settlement of differences: Appeals) a protective provision in respect of consumers installations which were connected up and supplied by the Undertakers prior to the prescribed date.

If any question arises of discontinuing an existing supply or of refusing a new supply to such an installation, and the existing consumer or new consumer who has taken over the installation satisfies an Inspector that the installation is in a satisfactory and safe condition although not in accord with current technical practice, it is not competent for the Inspector to decide that the Undertakers were or are entitled under Regulations 27 to 30 (inclusive) to refuse a supply of electricity to the installation.

In addition to the foregoing general observations, comment may be made on the provisions of the undermentioned Regulations.

Regulation 25. (Undertakers lines, etc., on consumers premises.)

This Regulation relates to electric lines and apparatus placed by the Undertakers on the premises of consumers and either belonging to or under the control of the Undertakers.

Paragraph (a) extends to all such electric lines and apparatus whether on the supply side or on the consumer's side of the supply terminals; and therefore applies to wiring installations and apparatus provided by the Undertakers on terms of hire or hire-purchase. In so far as the agreements between the Undertakers and consumers make provision with respect to the maintenance of such wiring installations and apparatus, paragraph (c) of the Regulation provides for a corresponding adjustment of the obligations of the Undertakers under the Regulation.

Attention is drawn to the new provisions of paragraph (b) which are directed to ensure that the standard of construction and installation adopted by the Undertakers in cases where they provide the consumers wiring and apparatus shall not be lower than the standard which the Undertakers would be prepared to accept for the purposes of Regulations 27 to 30 (inclusive) if the wiring and apparatus had been provided by the consumer.

Any difference which may arise between a consumer and the Undertakers with reference to the standard of construction and installation adopted by the Undertakers in providing the consumers wiring and apparatus can, under the provisions of Regulation 33, be determined by an Inspector, with a right of appeal to the Electricity Commissioners.

**Regulation 28.** (Supply at low voltage from more than one pair of conductors of system at medium voltage.)

This Regulation relates to cases where, in effect, separate supplies each at *low* voltage are given to separate circuits on the premises of an individual consumer from more than one pair of conductors of a three-wire or multi-phase system at *medium* voltage, so that in the event of the too close proximity of the separate low voltage circuits or of apparatus connected thereto there is the possibility of danger of shock at *medium* voltage.

It should be noted that *both* of the requirements (i) and (ii) specified in paragraph (a) of the Regulations must be complied with to entitle the Undertakers to commence a supply of energy at low voltage to a consumer from more than

one pair of conductors of a medium voltage system. The provisions of paragraph (a) relate to supplies commenced on or after the prescribed date and do *not* apply to supplies commenced by the Undertakers before the prescribed date. (See paragraph 2 (a) (i) of the Short Title, etc.)

The Regulation is *not* concerned with supplies at *medium* voltage, for example with a supply at 400 volts to an electric motor. Such medium voltage supplies come within the scope of Regulation 29 (Supply at medium voltage), and this does *not* prescribe any limitation as to the rating in kilowatts of any apparatus which may be supplied at medium voltage.

Attention is drawn to the amended form of paragraph (b) (iii) of Regulation 28.

### Regulation 31. (Supply for luminous tube signs on outside of premises.)

This Regulation in its amended form provides that the Undertakers shall not *knowingly* commence, or, subject to the provisions of Regulation 32, continue to give a supply which is to be or is being transformed 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 a guarantee in writing as to the suitability and condition of the consumers installation.

#### Regulation 32. (Discontinuance of supply in certain circumstances.)

This Regulation is concerned with the circumstances in which a supply of energy may be discontinued by the Undertakers, and deals with cases of emergency and other cases.

Where the Undertakers are prima facie satisfied that immediate action is justified as a work of emergency in the interests of the public safety or in order to avoid undue interference with the efficient supply of energy to other consumers, immediate discontinuance of the supply as a work of emergency is authorised by the Regulation.

In all other cases where the question of possible discontinuance arises, provision is made for due notification to the consumer of the matter complained of by the Undertakers, and for the settlement of any differences that may arise between a consumer and the Undertakers (in manner provided for by Regulation 33). Pending the settlement of any such difference, the Undertakers are not entitled by the Regulation to discontinue the supply except in the event of the development of a condition of emergency.

Every notice given to a consumer under this Regulation (as well as every notice under Regulation 33) must be endorsed with or be accompanied by a copy of Regulations 32 and 33.

In making a Regulation conferring upon the Undertakers the important right to discontinue a supply in circumstances other than those of emergency, the Electricity Commissioners were necessarily concerned to ensure as far as possible that consumers should be safeguarded against the risk of any unreasonable exercise of the right.

Where the question of the discontinuance of supply arises and the issue turns on the alleged non-compliance of the consumer's installation with the provisions of particular Regulations, it is apparent that there may be legitimate grounds for differences between the consumer and the Undertakers as to the matters complained of or as to the time specified for remedying the same. Even when these matters have been settled either by eventual agreement between the parties or in manner provided for in Regulation 33, there is still the possibility of subsequent differences as to whether defects have been properly rectified and the installation brought into compliance with the relevant provisions of the Regulation concerned.

It has thus been necessary to have regard to a variety of different circumstances in laying down the conditions under which a supply may properly be discontinued by the Undertakers in cases other than those of emergency.

**Regulation 33.** (Notices by Undertakers: Procedure as to settlement of differences: Appeals.)

This Regulation places an obligation on the Undertakers to give notice in *writing* to a consumer in any case where in pursuance of the Regulations the Undertakers decline to commence, to continue, or to recommence a supply of energy thereto. The notice *must* state the reasons of the Undertakers for so declining; and every notice given to a consumer under this Regulation (as well as every notice under Regulation 32) must be endorsed with or be accompanied by a copy of Regulations 32 and 33.

Provision is then made for the settlement of differences which may arise between a consumer and the Undertakers in connection with such notices, or on certain other matters, by an Inspector nominated by the Electricity Commissioners on the application of the consumer or his authorised agent or of the Undertakers, with a right of subsequent appeal to the Electricity Commissioners.

Reference has already been made to the protective provisions included in this Regulation for cases where consumers installations which were connected up and supplied prior to the prescribed date are shown to be in a satisfactory and safe condition although not fully in accordance with the generally accepted current standard of technical practice. (See pages 9-10.)

#### Miscellaneous

Of the Regulations and provisions under this heading, attention may be drawn to the following.

Regulation 38. (Notice of accidents: Inquiries by Electricity Commissioners.)

The provisions of paragraphs (a) and (b) of this Regulation are closely in accord with the provisions of Section 38 of the Schedule to the Electric Lighting

(Clauses) Act, 1899. The Acts or Orders of the great majority of authorised undertakers incorporate Section 38 or include a corresponding provision, and the object of paragraphs (a) and (b) of Regulation 38 is to apply similar provisions to all *remaining* Undertakers, the said paragraphs being *excepted* from application to Undertakers who are already subject to Section 38 (or corresponding provision).

The new provisions contained in paragraph (d) of Regulation 38 apply to *all* Undertakers, and are directed to ensure that the attention of the Electricity Commissioners shall be drawn to all cases of fatalities occasioned by or attributed to installations on the premises of ordinary consumers. The expression "ordinary consumer" is intended to mean the general body of consumers, such as domestic consumers, as contrasted with particular consumers (such as large power consumers) supplied under special agreements to whom as a general rule the provisions of the Home Office Electricity Regulations or the Mines Department Electricity Regulations would probably be applicable.

It should be noted that in virtue of the concluding paragraph of the Regulations, it is open to individual Undertakers to make application to the Electricity Commissioners from time to time for the making of a special Regulation.

A corresponding paragraph was included in prior Codes, and special Regulations have been made by the Electricity Commissioners in cases for example where a new technical development (such as the use in connection with overhead line systems of coils for suppressing arcing to earth) could not be brought into operation without some modification of the then-current Regulations, or where the Undertakers showed good cause for some variation in the provisions of a particular Regulation in its application to their undertaking.

# APPENDIX "A"

#### Definitions

The words and expressions which are defined in the Electricity Supply Regulations, 1937, for the purposes of those Regulations may be grouped into the following classes:—

(1) Expressions which are also defined in the same terms in the Electricity (Supply) Acts or the Schedule to the Electric Lighting (Clauses) Act, 1899 (subsequently referred to as the Schedule of 1899) for the purposes of those Acts.

This group includes the following word and expressions:---

"Consumer".

"Daily penalty". All defined in Section 1 of the Schedule of 1899.

"General supply".

"Service line".

"Electric Line". Defined in Section 32 of the Electric Lighting Act, 1882.

"Generating station". As defined in Section 36 of the Electricity (Supply) Act, 1919, and not as defined in Section 25 of the Electric Lighting Act, 1909.

(2) Expressions which are also defined but in *somewhat different terms* in the Electricity (Supply) Acts or the Schedule of 1899 for the purposes of those Acts.

This group includes the following expression and words:----

"Distributing main". The definition in Section 1 of the Schedule of 1899 has been adapted for the purposes of the Regulations by the addition of the words "or intended to be used".

"Energy". The definition in Section 1 of the Schedule of 1899 has been adapted, the words "applying the provisions of the principal Act to the Special Order" having been replaced in the Regulations by the words "applying the provisions of the Electricity (Supply) Acts, 1882 to 1936, to any Act or Order relating to the undertaking of the Undertakers".

"Main". The definition in Section 1 of the Schedule of 1899 has been adapted by the omission of the words "which may be laid down by the Undertakers in any street or public place and". A main as defined in the Regulations for the purposes thereof is thus not limited to a main laid down in any street or public place.

"Works". The definition in Section 32 of the Electric Lighting Act, 1882, has been adapted, the words "object of the Undertakers under this Act" having been replaced in the Regulations by the words "object of the Undertakers under the Electricity (Supply) Acts".

(3) Expressions which have been adapted from *somewhat analogous* expressions in the Electricity (Supply) Acts or the Schedule of 1899.

This group includes the following expressions:---

"Supply of electricity in bulk". The definition in Section 25 of the Electric Lighting Act, 1909, has been adapted. The definition in the Regulations does not include a supply of electricity by an authorised undertaking to a local authority authorised to undertake or contract for the lighting of streets, bridges, or public places.

"Supply terminals". The definition of "Consumer's terminals" in Section 1 of the Schedule of 1899, has been adapted by the omission of the words "and belonging to him". The wiring on the premises of many consumers is provided by and belongs to the Undertakers and forms part of their authorised undertaking. See Section 16 of the Electric Lighting Act, 1909; and Section 23 of the Electricity (Supply) Act, 1919.

(4) Expressions which were defined either in the same or in somewhat different terms in the Board of Trade Regulations of 1909 as adopted by the Electricity Commissioners in 1920 and subsequently included in their Electricity Supply Regulations, 1934.

This group includes the following words and expressions:---

"Connected with earth". The present definition was included in the Regulations of 1934 and accords closely with that of the expression "efficiently connected with earth" contained in the Codes of 1909 and 1920.

"Consumers wiring". The present definition was included in the Regulations of 1934 and was adapted from the definition of "Consumers wires" in the Codes of 1909 and 1920 so as to accord with the definition of "Supply terminals". "High voltage". The present definition, which was also included in the Regulations of 1934, covers all voltages normally exceeding 650 volts, whereas the corresponding definition in the Codes of 1909 and 1920 covered voltages normally exceeding 650 volts but not exceeding 3,000 volts.

"Low voltage". The present definition, in conformity with those contained in the Codes of 1909 and 1920 and also in the Regulations of 1934 covers voltages normally not exceeding 250 volts.

"Medium voltage". The present definition, in conformity with those contained in the Codes of 1909 and 1920 and also in the Regulations of 1934, covers voltages normally exceeding 250 volts but not exceeding 650 volts.

"Overhead line". The definition accords with that in the Codes of 1909 and 1920 and also in the Regulations of 1934.

"Substation". The present definition was included in the Regulations of 1934 but differs somewhat from that contained in the Codes of 1909 and 1920.

"Voltage". The present definition is in more detailed terms than that of the definition of "Voltage" in the Regulations of 1934 or of the corresponding definition of "Pressure" in the Codes of 1909 and 1920.

(5) Other expressions which were defined for the first time in the Regulations of 1934, and are retained in the Regulations of 1937 with or without modifications:-

This group includes the following words and expressions:-

- "Apparatus".
- "Circuit".
- "Conductor"
- "Consumers installation".
- "Dead"
- "Home Office Electricity Regulations".
- "Insulation".
- "Live".
- "Mines Department Electricity Regulations".
- "Switch station".
- "Authorised person". "Outdoor substation"

Definition retained in an amended form.

Definition retained without

modification.

- "Outdoor switch-station"
- "System".

(6) Expressions which appear for the first time in the Regulations of 1937 themselves.

This group includes three expressions, namely:-

"Electrode boiler".

"Institution of Electrical Engineers Regulations".

"Prior Regulations".

#### **Comments on particular Definitions**

In addition to the preceding observations of a comparative nature, comments by way of explanation may be made on the undermentioned Definitions.

"Electrode boiler". This expression has been defined for the purposes of Regulations 4 and 8 (Connection with earth) in which it is employed.

"Institution of Electrical Engineers Regulations". This expression is defined as meaning the Tenth Edition (September, 1934) of the Regulations for the Electrical Equipment of Buildings issued by the Institution of Electrical Engineers, with the alterations or additions current at the date of the Electricity Supply Regulations, 1937. It should be noted that any subsequent Regulations, alterations or additions issued by the Institution do not come within the scope of the expression unless they are approved by the Electricity Commissioners for the purposes of the Regulations of 1937.

"Overhead line". The definition covers any electric line which is placed above ground and in the open air. It is therefore not confined to ordinary overhead lines with bare conductors, but extends to cases where insulated cables are erected above ground and in the open air. Attention is drawn to Section 10 (b) of the Schedule of 1899, which refers to "any electric line above ground".

"Prior Regulations". Regulations relating to Overhead Lines are excluded from the scope of this expression.

"System". This expression where used throughout the Regulations is intended to mean the individual electrical systems which collectively make up the complete network. For example, the secondary circuit of a double-wound transformer and all the conductors and apparatus electrically connected to the said secondary circuit together constitute an individual electrical system within the meaning of the expression; while the primary circuit of the transformer and all conductors and apparatus electrically connected to the said primary circuit together constitute another individual electrical system.

## **APPENDIX "B"**

#### **Electricity Supply Regulations**, 1937

#### FORM OF NOTICE under Regulation 21 (c) of Failure of Supply

(Note.—The Electricity Commissioners require notification of any complete failure of supply of whatever duration affecting the whole of the undertaking; and will in due course indicate the nature of any other failures of which they require to be notified.)

Authorised Undertakers	
Act or Order	*************
Location of Failure (Borough,	District or <b>Parish</b> ).
	<b>yre)</b>
******	
Date and Duration of Failure.	DateFrom
	Το
Cause of Failure	
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<b>6000000000000000000000000000000000000</b>	**************************************
	(Signed)
	Electrical Engineer

Date.....

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