

*Regulations prescribing the Conditions on which Licenses to construct Electric Lines may be issued.*

LIVERPOOL, Governor.  
ORDER IN COUNCIL.

At the Government Buildings at Wellington, this nineteenth day of April, 1915.

Present :

THE RIGHT HONOURABLE W. F. MASSEY, P.C., PRESIDING  
IN COUNCIL.

IN pursuance and exercise of the powers and authorities conferred on him by section two of the Public Works Amendment Act, 1911, and of every other power and authority enabling him in this behalf, His Excellency the Governor of the Dominion of New Zealand, acting by and with the advice and consent of the Executive Council of that Dominion, doth hereby make the following regulations for the purposes of the said section; and doth hereby declare that this Order in Council shall come into operation on the date of the publication thereof in the *New Zealand Gazette*.

REGULATIONS.

IN these regulations the following words and phrases shall have the meanings hereby attached to them respectively:—

- “Area of supply” means the area within which the licensee is for the time being authorized to supply under the license.
- “Conductor” means any wire or cable for the transmission of electric energy placed either underground or overhead, and includes any casing, cover, conduit, or support for same.
- “Consumer” means any body or person supplied or entitled to be supplied with electrical energy by the licensee.
- “Consumer’s wires” means any electric line or lines on the consumer’s premises which are electrically connected with the licensee’s electric supply lines.
- “Earthed” means connected to the general mass of earth in such a manner as to ensure at all times an immediate and safe discharge to earth of electric energy.
- “Electric line” means any wire, wires, conductor, or other means used for conveying, transmitting, or distributing electricity for power, lighting, or heating purposes; and includes any instrument, insulator, casing, tubing, pipe-covering, or post enclosing or supporting an electric line, or anything connected therewith.
- “Electric distribution-line” means that portion of the system to which electric service lines are connected for the purpose of supplying consumers.
- “Electric service line” means the line which connects consumers’ premises with an electric distribution-line.
- “Extra-high pressure” means pressures over 3,300 volts.
- “High pressure” means pressures over 650 volts and up to 3,300 volts.
- “Inspecting Engineer” means and includes any Inspecting Engineer appointed by the Minister to inspect works to be constructed or maintained by virtue of electric-line licenses issued under the Public Works Act, 1908, and any or all of its amendments, or under any one or more of such amendments only, or any Act or Acts passed in amendment thereof or substitution thereof.
- “Low pressure” means pressures up to 650 volts.
- “Licensee” means any local authority, company, body, person, or persons authorized to supply electric energy within the area of supply or any part thereof.
- “Minister” means Minister of Public Works.
- “Pressure” means the difference of electric potential between any two conductors through which a supply of energy is given, or between any part of either conductor and the earth.
- “Public Works Engineer” means the Engineer in charge of the Public Works District in which the area of supply is situated.
- “Street” includes road.
- “Substation” means any building or enclosure, either above or below ground, which shall be accessible only to authorized persons and containing transforming or converting apparatus for the supply of energy.

“Telegraph” includes telephone.

“Telegraph line” has the same meaning as “electric line” in the Post and Telegraph Act, 1908, and also includes all telegraph, telephone, and electric signaling wires belonging to the Government Railways Department.

These regulations shall be incorporated with and form part of every license issued by the Governor in Council under section 2 of the Public Works Amendment Act, 1911, save so far as they are expressly varied or excepted by the license, and shall, subject to any such variations or exceptions, apply so far as applicable to the works authorized to be erected and maintained by such license.

The regulations are made subject to the power of the Governor in Council to make further or other regulations, as may be found expedient from time to time.

1. Area of Supply.

The area of supply shall be the area named for that purpose in the license.

If the licensee supplies energy or erects or lays down electric lines or works in contravention of this clause the Governor in Council may, if thought fit, revoke the license.

2. Systems of Supply.

The supply of electric energy shall be given on one or more of the following systems, and the declared pressure at the consumer’s terminals shall be as stated hereunder:—

(a.) Two-wire system at a pressure not exceeding 230 volts,—

(1.) Direct current.

(2.) Single-phase alternating current.

(b.) Three-wire system at a pressure not exceeding 460 volts between the outer conductors and 230 volts between each outer and intermediate conductor. The intermediate conductor shall be earthed in accordance with clause 3,—

(1.) Direct current.

(2.) Single-phase alternating current.

(c.) Three-phase four-wire system, at a pressure not exceeding 400 volts between phases and 230 volts between each phase and neutral conductor. The neutral conductor shall be earthed in accordance with clause 3.

(d.) High or extra-high pressure alternating single-phase two-wire supply to motors, motor generators, pole transformers, transformers placed in street boxes or in substations. From the transformer, electric distribution-lines shall be laid for a single-phase two- or three-wire alternating-current supply at low pressure. In the case of three-wire distribution the intermediate conductor shall be earthed in accordance with clause 3.

(e.) High or extra-high pressure alternating-current three-phase supply to motors, motor generators, rotary converters, pole transformers, or transformers placed in substations. The neutral point shall be earthed in accordance with clause 3, paragraph 5. From the substations or transformers, low-pressure electric distribution-lines shall be laid in accordance with subclauses (a), (b), and (c) of this clause.

(f.) High or extra-high pressure two-wire direct-current supply to motors and motor generators.

(g.) Direct-current supply from tramway circuits at 500 to 600 volts to motors or motor generators on consumers’ premises or to lamps for street-lighting purposes.

3. Connection of Circuits with Earth.

The connection of circuits with earth shall be made in accordance with the following conditions:—

Where any part of a circuit is normally connected with earth, the connection with earth shall be efficiently maintained, except when it is interrupted by means of a switch or link for the purpose of periodical tests.

The connection with earth of the intermediate conductor of a low-pressure three-wire system or the neutral conductor of a low-pressure three-phase four-wire system shall be made at one point only on each distinct circuit—namely, at the generating station, substation, or transformer—and the insulation of the circuit shall be efficiently maintained at all other parts.

In a three-wire direct-current system the current from the intermediate conductor to earth shall be continuously recorded by a recording ammeter, and if it at any time exceeds one-thousandth part of the maximum supply current, steps shall be immediately taken to improve the insulation of the system.

In a three-wire single-phase system with earthed intermediate conductor, and in a three-phase four-wire system with earthed neutral conductor, tests shall be periodically made to ascertain whether any current is passing to earth by means of the earth connection and if at any time the current to