"Electric distribution line" means any line erected for the purpose of connecting an electric service line thereto.

"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 service line" means the line connecting the consumers' premises to an electric distribution line.

"Extra high pressure" means pressures over 3,300 volts.

"High pressure" means pressures over 600 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 any electric-line licenses, or any water-power licenses, or any combined water-power and 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 therefor.

"Low pressure" means pressures up to 600 volts.

"Minister" means Minister of Public Works.

"Pressure" means difference of electric potential.

"Street" includes road.

"Telegraph" includes telephone.

"Telegraph line" has the same meaning as in the Post and Telegraph Act, 1908.

2. System of Supply.

Electric energy shall be generated in the form of three-phase currents at a frequency of 50 cycles per second and a pressure of 2,400 volts between phases. This shall be transformed up to 35,000 volts between phases for transmission to the main sub-stations, and there transformed down to 3,300 volts for primary distribution. In the secondary sub-stations or in pole transformers it shall be transformed down to 400 volts between phases, and 230 volts between each phase and the neutral for low-tension supply, and converted to direct current at 500 to 600 volts for tramway and power supply. Single-phase constant-current series circuits up to a pressure of 3,300 volts may also be used for outside lighting.

3. Capacity of Apparatus, &c.

All apparatus and conductors for all pressures shall be sufficient in size and power for the work they are called upon to do, and so constructed, installed, protected, worked, and maintained as to prevent danger so far as is reasonably practicable.

4. Neutral Wires.

The neutral point of one or more of the generators in service shall be earthed.

The neutral point of each star connection of the extra high-pressure system shall be earthed at one point and one point only. The neutral of the primary distribution at 3,300 volts shall be earthed at least at one point and may be earthed at several points. The earth may be used for the neutral return for transformers not exceeding 20 kilowatts at 3,000 to 3,300 volts, situated more than four miles from the General Post Office, Dunedin. The neutral point of each secondary distributing system shall be earthed at one point and one point only. The earth shall not be utilized as the return for any low-pressure circuits.

5. Regulation of Pressure.

The pressure shall be maintained within 4 per cent. on lighting-distributing circuits above or below the declared pressure at the consumers' terminals. The said Council shall supply suitable recording voltmeters for this service, and on complaint by any consumer that the variations in voltage exceed these limits, or on the instructions of the Inspecting Engineer, the said Council shall connect a recording voltmeter to record the pressure between the lines at their entrance to the consumers' premises and shall supply to the Inspecting Engineer a chart showing the variations in voltage between the lines at this point for a period of seven consecutive days. If the variations thus recorded exceed the above limits the said Council shall take immediate steps to comply with this regulation. If after thirty days a similar chart shows that the above limits of variation in voltage are not complied with, a breach of this license shall be deemed to have been committed. If the accuracy of the said Council's recording voltmeter is questioned by the consumer a standard instrument shall be supplied by the Inspecting Engineer, the reading of which shall be accepted as final.

6. Switchboard.

All switchboards shall be made of and mounted on material that is not inflammable, and no switchboard conductor shall carry electric current at a density exceeding 1,000 amperes per square inch. No conductor at a pressure above 600 volts shall be exposed on the front of any switchboard, and the back of any switchboard carrying exposed conductors at a pressure over 600 volts shall be screened off and accessible only to authorized persons.

All power-house and sub-station switchboards shall be provided with two efficient and independent earth connections connected in parallel, to one of which all frames, instrument-cases, and other metal parts shall be connected. Tests of the efficiency of the earth connection shall be made at least once a month and recorded.

7. Circuit-breakers.

All outgoing feeders and distributors from any transformer-house or sub-station shall be provided with automatic circuit-breakers or fuses set to open at 50 per cent. excess current over the rated full load of such feeder or distributor.

8. Overhead Electric Lines.

Overhead electric lines shall consist of conductors of stranded hard-drawn copper, aluminium, and other material of not less than 0·0129 square inch section, provided that service wires of short span of 100 ft. or less shall be not less than 0·0072 square inch in section.

The stress in overhead conductors shall not exceed 25,000 lb. per square inch for copper and 12,000 lb. per square inch for aluminium, 35,000 lb. per square inch for ordinary iron in the extreme case of a temperature of 20 degrees Fahr. and a wind-pressure of 18 lb. per square foot of diametrical plane occurring simultaneously. The span between supports and the sag shall be determined to conform with the above limiting stresses.

No overhead electric lines shall come within 2 ft. of any other aerial wires or cables except where it may be permitted to pass either set of wires between other wires at a pole or support.

Lines at 400 volts shall be insulated throughout with jute braiding impregnated with waterproof compound, provided that where circumstances permit the lines may, with the consent of the Minister, be bare.

Earthed neutrals may in all cases be bare.

Electric lines at 3,300 volts shall be covered with vulcanized rubber of at least 300 megohm grade, provided that where circumstances permit the lines may, with the consent of the Minister, be bare, subject to any special conditions which may be required by the Minister.

Electric lines at 35,000 volts shall be bare.

Where high- and extra high-pressure lines are supported on the same poles or supports both lines shall be bare, and means shall be provided for effectively earthing the high-pressure line in the event of the extra high-pressure line making contact with the high-pressure line.

Low-pressure and extra high-pressure lines shall not be carried on the same poles or supports except with the consent of the Minister.

9. Supports for Overhead Electric Lines.

All overhead electric lines at 400 volts shall be carried at a minimum height of 18 ft. above the ground.

All overhead lines at a pressure of 3,000 volts shall be carried at a minimum height of 20 ft. above the ground.

All overhead lines at a pressure of 35,000 volts shall be carried at a minimum height of 22 ft. above the ground.

All steel poles or supports of extra high-pressure lines shall be effectively earthed.

At road crossings the above minimum heights shall be increased in each case by 2 ft.

At electric tramway crossings all electric lines shall be carried at such a height as to be out of reach of the trolly-pole of the tram-car when in a vertical position.

All aerial wires shall be attached to suitable insulators carried on cross-arms of suitable material and cross-section, and they shall be so attached to the insulators or guarded that they cannot fall away from the support. Conductors covered with insulating material shall be so attached that their insulation shall not be impaired where they are secured to the insulator.

Electric lines may be carried on brackets on buildings provided they are at least 18 ft. from the ground, insulated with 600 megohm grade vulcanized indiarubber, are kept at least one foot clear from the building, and are inaccessible from any window, balcony, parapet, or other portion of the building without the use of a ladder or other special appliance.

Electric lines carried on poles shall be at least 18 ft. from the ground, and not less than 5 ft. measured horizontally nor 7 ft. measured vertically from any part of any building or