

THE ELECTRICITY ORDINANCE

THE ELECTRICITY RULES, 1999 (Swk. L.N. 84/99)

ARRANGEMENT OF RULES

PART I PRELIMINARY

Rule

1. Citation and commencement
2. Interpretation

PART II INSTALLATION

Licensing and Registration of Installation

3. Application for licence for installation
4. Procedure on application
5. Where application is disallowed
6. Approval of application
7. Certificate of Registration of installation
8. Inspection and test of installation
9. Cancellation of Certificate of Registration of installation
10. Effect of cancellation of Certificate on licensee

Supervision and Test of Installation

Rule

11. Approval for commencement of wiring
12. Supervision and completion of installation
13. Test of installation
14. Supervision and Completion Certificate and Test Certificate

Material, Equipment and Method of Installation

15. Apparatus, conductor, accessory, etc.
16. Switch, switchfuse, fuse switch, circuit breaker, contactor, fuse, etc.
17. Generator, motor, transformer, etc.
18. Means of isolation

Installation of Switchboard

19. Arrangement of switchboard in general
20. Working on a switchboard
21. Switchboard operating at high or extra high voltage

Underground Supply Line

22. Underground mains and connections
23. Joint, connection or termination

Portable Apparatus

24. Portable apparatus in general
25. Portable apparatus on a dredge or floating structure

Installation of Electric Sign

Rule

26. Electric sign
27. Fireman's switch, notice and transformer
28. Steps to be taken by owner or management

Other Installations

29. Installation not in use
30. Power of Director to make adjustment or alteration to installation
31. Installation for electric smelting, X-ray, etc.
32. Installation in a place of public entertainment
33. Installation on a dredge or floating structure

Earthing of Installation

34. Earthing of metallic part, neutral point, etc.
35. Method of earthing
36. Protection against earth leakage current

General Requirements of Installation

37. Room for switchboard or equipment
38. Notice
39. Instructions for treatment of electric shock
40. Fire extinguishers

Installation of Aerial Line

Rule

41. General conditions of aerial line
42. Aerial line operating at low voltage
43. Aerial line operating at high or extra high voltage

PART III

OPERATION

Examination of Competent Person

44. Appointment of Board of Examiners
45. Application for examination to be made to the Board
46. Eligibility to become Electrical Services Engineer
47. Eligibility to become Competent Electrical Engineer
48. Eligibility to become Electrical Supervisor
49. Eligibility to become Chargeman
50. Eligibility to become Wireman
51. Eligibility to become Cable Jointer
52. Temporary registration of foreign person
53. Medical evidence of fitness
54. Fee for examination, endorsement and replacement of Certificate of Competency/Certificate of Registration
55. Restriction or endorsement of Certificate of Competency
56. Form of Certificate of Competency
57. Lost or damaged Certificate of Competency
58. Suspension and revocation of Certificate of Competency

Competent Person

Rule

59. Competent person
60. Competent person responsible for a public installation
61. Competent person on each shift
62. Registration of competent person
63. Competent person to connect switchboard, equipment, etc.
64. Competent persons to submit plans, drawings and specifications

Regular Inspection By Competent Person

65. Installation to be visited and inspected by competent person
66. Competent person and frequency of visit and inspection
67. Duty of Engineer or Supervisor to inspect and report
68. Director to determine number of visits
69. Duty to inform and to make good defects

Registration of Electrical Services Contractor

70. Electrical Services Contractor
71. Requirements for registration as an Electrical Services Contractor
72. Information required for registration as an Electrical Services Contractor
73. Fee for Certificate of Registration as an Electrical Services Contractor

Registration of Electrical Installation Contractor

Rule

- 74. Electrical Installation Contractor
- 75. Requirements for registration as an Electrical Installation Contractor
- 76. Information required for registration as an Electrical Installation Contractor
- 77. Classification of Electrical Installation Contractors
- 78. Fee for registration as an Electrical Installation Contractor

Registration of Electric Sign Contractor

- 79. Electric Sign Contractor
- 80. Requirements for registration as an Electric Sign Contractor
- 81. Information required for registration as an Electric Sign Contractor
- 82. Fee for Certificate of Registration as an Electric Sign Contractor

Registration of Electrical Repair Contractor

- 83. Electrical Repair Contractor
- 84. Requirements for registration as an Electrical Repair Contractor
- 85. Information required for registration as an Electrical Repair Contractor
- 86. Fee for Certificate of Registration as an Electrical Repair Contractor

Registration of Switchboard Manufacturer

- 87. Switchboard Manufacturer

88. Requirements for registration as a Switchboard Manufacturer operating at low voltage

Rule

89. Requirements for registration as a Switchboard Manufacturer operating at low voltage and higher than low voltage
90. Information required for registration as a Switchboard Manufacturer
91. Fee for Certificate of Registration as a Switchboard Manufacturer

Approval of Equipment

92. Certificate of Approval for equipment
93. Marking or labelling of approved equipment
94. Samples of equipment to be delivered to Director
95. Test and modification before approval
96. Submission for test and seizure of dangerous equipment

Renewal, Transfer, Cancellation, Removal and Reinstatement

97. Renewal of Certificate of Registration
98. Transfer of Certificate of Registration
99. Cancellation of Certificate of Registration
100. Removal from and reinstatement to the Register of Certificate of Registration
101. Renewal of Certificate of Approval
102. Transfer of Certificate of Approval
103. Cancellation of Certificate of Approval
104. Removal from and reinstatement to the Register of Certificate of Approval

PART IV
MAINTENANCE

Maintenance of Installations

Rule

105. Inspection and test for the purpose of maintenance of installation, *etc.*
106. Competent person to undertake maintenance work
107. Adequate safety precautions to be taken during work
108. Competent person to issue written instruction

PART V
MISCELLANEOUS

109. Electrical Inspector's identity card
110. Special order by Director
111. Prohibition of use of equipment dangerous to health
112. Fees payable to Director
113. Licensee to keep records
114. Exemptions
115. Transitional and saving provisions
116. Penalty
117. Revocation

FIRST SCHEDULE — Forms

SECOND SCHEDULE — Fees and competent persons to submit plans, *etc.*

THIRD SCHEDULE — Calculation of maximum current demand for domestic installation

THE ELECTRICITY ORDINANCE

THE ELECTRICITY RULES, 1999 (Swk. L.N. 84/99)

(Made under section 36)

In exercise of the powers conferred by section 36 of the Electricity Ordinance [*Cap. 137 (1958 Ed.)*], the Majlis Mesyuarat Kerajaan Negeri has made the following Rules:

PART I PRELIMINARY

Citation and commencement

1.—(1) These rules may be cited as the **Electricity Rules, 1999**, and shall, subject to subrule (2), come into force on the 1st day of January, 2000.

(2) The following rules shall come into force on a date to be determined, by notification in the *Gazette*, by the Minister:

- (a) rule 13(3);
- (b) rule 23(2), (3) and (4);
- (c) rules 59, 60 and 61;
- (d) rules 65, 66, 67, 68 and 69;
- (e) rule 70; and
- (f) rule 87.

Interpretation

2. In these Rules—

“accessory” means a device, other than current-using equipment, associated with such equipment, or with the wiring of an installation;

“aerial line” means an electric supply line which is placed above the ground and in open air, and includes service lines;

“apparatus” means any electrical apparatus, and includes the device or fitting in which a conductor is used, or of which it forms part of;

“appliance” means any device which utilises electricity for a particular purpose;

“authorized agent” means a person appointed by the management or the owner of an installation, or by a contractor, acting as an agent for and on behalf of the management or owner, to carry out certain duties incidental to the generation, transmission, distribution and utilisation of energy:

Provided that the said person possesses the qualifications prescribed for persons performing those duties, or if no qualifications are prescribed, is competent for the purpose for which he is employed, the burden of proof of competency being on the employer;

“bare” means not covered with or protected by insulating material;

“cable” means a length of insulated single conductor, whether solid or stranded, or of two or more such conductors, each provided with its own insulation, which are laid together; the insulated conductor or conductors may or may not be provided with an overall covering for mechanical protection;

“Cable Jinter” means a person who holds a Certificate of Competency as a Cable Jinter issued under rule 51;

“Certificate of Approval” means a Certificate of Approval issued by the Director for the manufacture, import, display, sale or advertisement of any electrical equipment in the State of Sarawak;

[Am. Cap. A109]

“Chargeman” means a person who holds a Certificate of Competency as a Chargeman issued under rule 49;

“Director” shall have the meaning assigned thereto in the Ordinance;

[Am. Cap. A109]

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

“circuit breaker” means a device for making and breaking a circuit under energy condition, such as a short circuit, where the circuit is broken automatically;

“Competent Electrical Engineer” means a person who holds a Certificate of Competency as a Competent Electrical Engineer issued under rule 47;

“competent person” shall have the meaning assigned thereto in the Ordinance;

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

“consuming apparatus” means an apparatus which is intended to consume energy;

“distributing main” means the portion of any main with which a service line is or is intended to be immediately connected;

“domestic installation” means an installation in a private dwelling which is not used as a hotel or boarding house or for the purpose of carrying out any business, trade, profession or service;

“earthed” means connected to the general mass of the earth;

“Electrical Installation Contractor” means a person who holds a Certificate of Registration as an Electrical Installation Contractor issued under rule 74;

“Electrical Repair Contractor” means a person who holds a Certificate of Registration as an Electrical Repair Contractor issued under rule 83;

“Electrical Services Contractor” means a person who holds a Certificate of Registration as an Electrical Services Contractor issued under rule 70;

“Electrical Services Engineer” means a person who holds a Certificate of Competency as an Electrical Services Engineer issued under rule 46;

“electrical work” means any work performed or carried out on an electrical installation, and includes the installing, constructing, erecting or repairing thereof, the altering of the structure, the replacing of any of its parts, the adding of any part thereto or the carrying out of any work thereon for the purposes of its maintenance, but does not include work in relation to—

(a) the manufacturing of an electrical installation or the assembling thereof in the course of, or in connection with, its manufacture for the purpose of producing a new article; or

(b) the oiling, greasing, cleaning or painting of an electrical installation;

“electric sign” means a neon sign or other consuming apparatus of like nature operating at more than 400 volts;

“Electric Sign Contractor” means a person who holds a Certificate of Registration as an Electric Sign Contractor issued under rule 79;

“Electrical Supervisor” means a person who holds a Certificate of Competency as an Electrical Supervisor issued under rule 48;

“extra high voltage” shall have the meaning assigned thereto in the Ordinance;

“extra low voltage” means a voltage normally not exceeding 50 volts alternating current or 120 volts direct current, whether between conductors or between conductor and earth;

“final circuit” means a circuit connected directly to current-using equipment, or to a socket outlet or other points, for the connection of the equipment;

“high voltage” shall have the meaning assigned thereto in the Ordinance;

“licensed installation” means an installation for which a valid Certificate of Registration has been issued under rule 7;

“line conductor” means a conductor forming part of an aerial line;

“low voltage” means a voltage normally exceeding extra low voltage but not exceeding 1,000 volts alternating current or 1,500 volts direct current between conductors, or 600 volts alternating current or 900 volts direct current between conductor and earth;

“multiple earth neutral” means a neutral line conductor which is earthed at more than one point;

“neutral conductor” means a conductor connected to the neutral point of a system and contributing to the transmission of electrical energy;

“occupier” means the person occupying any premises, and includes the person having the charge, management or control thereof either on his own account or as an agent of another person, but does not include a lodger;

“Ordinance” means the Electricity Ordinance [**Cap. 137 (1958 Ed.)**];

“owner” means the owner or lessee of an installation, and includes, where the owner or lessee is absent, his authorized agent;

“person” includes any individual, firm, company, association, partnership or body of persons, whether incorporated or otherwise;

“phase conductor” means a conductor of an alternating current system for the transmission of electrical energy, other than a neutral conductor;

“portable apparatus” means an apparatus so constructed that it may be readily moved from place to place and be safely operated without any structural alteration following the removal;

“private installation” means an installation operated by a licensee or owner solely for the supply of energy to and use thereof on the licensee’s or owner’s own property or premises, or, in the case of a consumer, taking energy from a public installation, for use only on the licensee’s or owner’s property or premises;

“public installation” means an installation operated by a licensee for the supply of energy to any person other than the licensee;

Provided that the licensee may use energy for his own purposes where the use is consistent with the terms of the licence;

“Resident Competent Electrical Engineer” means a Competent Electrical Engineer who is engaged on a full-time basis to be responsible for a particular installation;

“residual current device” means a mechanical switching device or an association of devices intended to cause the opening of the contacts when the residual current attains a given value under specified conditions;

“road” has the meaning assigned thereto in the Road Transport Act 1987 [Act 333];

“service line” means an electric supply line through which energy is, or is intended to be, supplied to one consumer or a group of consumers from a distributing main or immediately from a generating station or substation;

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

“switchboard” means an assembly of switchgear with or without instruments, but does not apply to a group of local switches in a final circuit;

“Switchboard Manufacturer” means a person who holds a Certificate of Registration as a Switchboard Manufacturer issued under rule 87;

“switchgear” means an assembly of main and auxiliary switching apparatus for operation, regulation, protection or other control of electrical installations;

“telecommunication authority” means the Malaysian Communications and Multimedia Commission established under section 4 of the Malaysian Communications and Multimedia Act 1998 [**Act 589**];

“telecommunication line” means a wire or wires used for the purpose of a telecommunication with any casing, coating, tube or pipe enclosing the same, and any appliances and any apparatus connected therewith for the purpose of fixing or insulating the same;

“transformer” means an apparatus without continuously moving parts which by electromagnetic induction transforms alternating voltage or current in one winding into alternating voltage or current in one or more windings, usually at different values of voltage or current, and includes an auto-transformer;

“Wireman” means a person who holds a Certificate of Competency as a Wireman issued under rule 50.

PART II

INSTALLATION

Licensing and Registration of Installation

Application for licence for installation

3.—(1) Application for a licence to use, work, operate an installation or to supply or transmit energy under section 4(1) of the Ordinance shall be made to the Yang di-Pertua Negeri through the Director.

[Am. Cap. A109]

(2) Such application shall be made in Form A in the First Schedule.

(3) The applicant shall state in his application whether the licence is for a public or private installation.

Procedure on application

4.—(1) The Director shall upon receipt of the application forward a copy thereof to the Sarawak Electricity Supply Corporation (“the Corporation”) who may, pursuant to section 4(6) of the Ordinance, make such representation with reference to the application, as the Corporation deems fit, within thirty days from date of receipt of the copy of the application from the Director:

[Am. Cap. A109]

Provided that the Director may extend the time for the Corporation to make its representation upon such terms and conditions as he may deem fit to impose.

[Am. Cap. A109]

(2) Upon receipt of the representation, if any, from the Corporation or upon expiry of the period fixed for the Corporation to make its representation, the Director shall forward the application together with any representation from the Corporation to the Permanent Secretary for the Ministry having responsibilities for public utilities, for submission to the Majlis Mesyuarat Kerajaan Negeri which shall advise the Yang di-Pertua Negeri thereon.

[Am. Cap. A109]

Where application is disallowed

5. Where the application is not approved by the Yang di-Pertua Negeri, the decision relating thereto shall be communicated to the Director who will notify the applicant. The decision of the Yang di-Pertua Negeri shall be final and shall not be questioned in any court.

[Am. Cap. A109]

Approval of application

6.—(1) When an application for licence under section 4 of the Ordinance is approved by the Yang di-Pertua Negeri, the decision thereof shall be communicated to the Director, and a licence shall be granted to the applicant in such form and containing such terms and conditions as the Yang di-Pertua Negeri shall approve.

(2) Notwithstanding the grant of the licence, all installation of the licensee shall be registered with the Director under rule 7 before such installation may be operated by the licensee.

(3) The fees payable for the grant of a licence or the renewal thereof are stipulated in Part I of the Second Schedule and shall be paid prior to the grant or renewal thereof.

[Am. Cap. A109]

Certificate of Registration of installation

7.—(1) All licensed installations shall be registered with the Director unless such registration is exempted by him under rule 114. An application for the registration of an installation shall be in Form B in the First Schedule.

[Am. Cap. A109]

(2) The Director shall, upon payment of the fee prescribed in Part II of the Second Schedule, issue a Certificate of Registration in Form C in the First Schedule for all licensed installations registered with him.

[Am. Cap. A109]

(3) Each Certificate of Registration shall be valid for a period of 1 year and may be renewed if the installation thereby covered has been inspected and passed for operation under rule 8, upon payment of the renewal fee stipulated in Part II of the Second Schedule. Such renewal shall be in Form D in the First Schedule.

Inspection and test of installation

8.—(1) Inspection and test of a new installation for the purpose of registration thereof shall be made not later than twenty-one days after the receipt of Form B in the First Schedule and reasonable notice of the inspection and test shall be given in writing to the owner or management of the installation, as the case may be.

(2) Upon receiving the notice issued under subrule (1), the owner or management of the installation shall cause the preparation and test to be made and shall be present at the time of such inspection and test.

(3) Notice of initial and follow-up inspection and test shall be in Forms E and F respectively in the First Schedule, and shall be served either personally upon the person to whom they are addressed or be sent to him by registered post or be affixed conspicuously to the building where the installation to be inspected and tested is located.

(4) A fee shall be charged for the inspection and test of any installation at the rate prescribed in Part III of the Second Schedule.

Cancellation of Certificate of Registration of installation

9.—(1) The Director may cancel a Certificate of Registration of installation issued under these Rules if—

- (a) the installation is no longer required to be used;
- (b) the installation is found to be unsafe for use;
- (c) the person to whom the certificate was issued uses it for a purpose other than for that for which it was issued; or
- (d) the person has contravened or failed to comply with any of the provisions of the Ordinance or these Rules or any written law.

[Am. Cap. A109]

(2) Where a Certificate of Registration of an installation is cancelled by the Director pursuant to subrule (1), the person to whom the Certificate was issued shall return it to the Electrical Inspector within fourteen days after being notified in writing of the cancellation.

[Am. Cap. A109]

(3) Any person dissatisfied with the decision of the Director made under this rule may appeal to the Minister within twenty-one days from the date of receipt thereof. The decision of the Minister on such appeal shall be final.

[Am. Cap. A109]

Effect of cancellation of Certificate on licensee

10. Where a Certificate of Registration for an installation covered by a licence issued under section 4 of the Ordinance is cancelled, the licensee shall replace such installation forthwith or within such time as the Director may permit. In the event that the licensee does not replace the affected installation, the licence may be cancelled or withdrawn by the Yang di-Pertua Negeri acting on the recommendation of the Director.

[Am. Cap. A109]

Supervision and Test of Installation

Approval for commencement of wiring

11.—(1) No wiring or rewiring of an installation or extension to an existing installation shall be carried out by an Electrical Installation Contractor without first obtaining the approval in writing from the public installation licensee who supplies energy to the said installation:

Provided that no approval is necessary for an extension to an existing wiring of a domestic installation where the total current consumed at any one time by the said installation, as a result of the extension, does not exceed the maximum current demand as agreed upon in the supply contract between the owner and the public installation licensee.

(2) The manner for calculating the maximum current demand of a domestic installation in subrule (1) shall be as prescribed in the Third Schedule.

Supervision and completion of installation

12.—(1) Any electrical wiring in an installation which receives single phase supply from a public installation licensee shall be carried out by a Wireman Second Grade or First Grade, and upon completion of the installation, the Electrical Installation Contractor shall issue a Supervision and Completion Certificate.

(2) Any electrical wiring in an installation operating at low voltage which receives three phase supply from a public installation licensee shall be carried out by a Wireman First Grade, and upon completion of the installation, the Electrical Installation Contractor shall issue a Supervision and Completion Certificate.

(3) For the purpose of this rule, a Wireman First Grade or Second Grade, as the case may be, shall be employed on a full-time basis by an Electrical Installation Contractor.

Test of installation

13.—(1) Upon completion of wiring or rewiring of an installation or extension to an existing installation in rule 12 (1), the installation shall be tested by an Electrical Installation Contractor and he shall issue a Test Certificate of the installation.

(2) Upon completion of wiring or rewiring of an installation or extension to an existing installation as in rule 12 (2), the installation shall be tested by an Electrical Installation Contractor and he shall issue a Test Certificate for the installation.

(3) Upon completion of an installation or extension to an existing installation operating at higher than low voltage, the installation shall be tested by an Electrical Services Engineer, employed on a full-time basis by an Electrical Services Contractor and who shall issue a Test Certificate for the installation.

Supervision and Completion Certificate and Test Certificate

14.—(1) The Supervision and Completion Certificate and Test Certificate in rules 12 and 13 shall be in such forms as may be prescribed by the Director.

[Am. Cap. A109]

(2) No installation, other than those in rule 11, shall receive energy from or be given energy by the public installation licensee until the Supervision and Completion Certificate and Test Certificate have been submitted by the owner or management of the installation to the public installation licensee.

Material, Equipment and Method of Installation

Apparatus, conductor, accessory, etc.

15.—(1) Any apparatus, conductor or accessory for the purpose of connection to an installation shall be sufficient in size, power and number to serve the purpose for which it is intended and shall be constructed, installed, arranged, protected, worked and maintained in such a manner as to prevent danger.

(2) A conductor shall be insulated and effectively protected or so placed or safeguarded in such a manner as to prevent danger.

(3) A conductor which is neither protected by metallic sheath nor conveyed in a conduit shall be protected by an insulating bush or tube, where it passes through a wall, partition, floor, or the roof of a building or other structure.

(4) Every cable or metallic conduit in which cables are run can be buried in plaster provided that the cable or conduit is of such material that corrosion of the cable or conduit will not cause weakening of the insulation and consequent danger from leakage of current.

(5) A cable or metallic conduit in which cables are run may be buried in pure cement or concrete.

(6) Any conductor or apparatus that is exposed to the weather, water, corrosion, undue heating or used in inflammable surroundings or in an explosive atmosphere shall be constructed or protected in such a manner as to prevent danger.

Switch, switchfuse, fuse switch, circuit breaker, contactor, fuse, etc.

16.—(1) Any switch, switchfuse, fuse switch, circuit breaker or isolating link shall be—

(a) constructed, placed or protected in such a manner as to prevent danger;

(b) constructed and adjusted in such a manner as to maintain efficient contact;

(c) provided with an efficient handle insulated from the system and arranged in such a manner that the handle cannot inadvertently touch any live part;

(d) constructed or arranged in such a manner that it cannot accidentally come into contact with any live conductor when left in the “off” position;

(e) constructed in such a manner that it cannot be left in partial contact with any live conductor; and

(f) constructed in such a manner that an arc cannot be maintained when used for breaking a circuit on load.

(2) Any circuit breaker or contactor used for changing a source of supply shall have poles which include a pole for the neutral.

(3) Any fuse or circuit breaker shall be—

(a) constructed and arranged in such a manner so as to break the current when it exceeds a given value for a sufficient time to prevent danger; and

(b) constructed, guarded or placed in such a manner as to prevent danger of overheating, arcing or from the scattering of hot metal or other substance.

(4) A fuse in subrule (3) shall be either of such construction or protected by a switch so that the fusible portion shall be readily renewed without danger.

Generator, motor, transformer, etc.

17.—(1) Any part of a generator, motor, transformer, or other equipment operating at high or extra high voltage which is within the natural reach of a person shall be protected where necessary to prevent danger.

(2) A motor shall be controlled by one or more effective starting devices for starting or stopping it.

(3) The switch referred in subrule (2) shall be placed in such a manner that it can be easily operated by the person in charge of the motor.

(4) Any switchgear for use in connection with winches, winders and cranes exposed to the weather, on dredges or in underground places, operating at higher than low voltage, shall be of the totally enclosed metal-clad type.

(5) Where energy is transformed from one voltage to another, provision shall be made to guard against danger by reason of the lower voltage system becoming accidentally charged above its normal voltage by leakage from or leakage due to contact with the higher voltage system.

(6) Where an auto-transformer is used for any purpose, care shall be taken to ensure that the voltage between any part of the lower voltage winding and the earth does not exceed the voltage between the terminals of the lower voltage winding.

(7) An underground substation, not otherwise easily and safely accessible, shall be provided with adequate means of access by a door way with a staircase or ladder securely fixed and placed in such a manner that no live part of any switchboard or any bare conductor is within the natural reach of any person.

Means of isolation

18. In an electrical system effective means shall be provided for—

- (a) making dead every part of the system;
- (b) protecting every part of the system from excess current;
- (c) making dead every branch of a distribution system without interruption of supply to the remainder system; and

(d) making dead every sub-circuit of a wiring system without interruption of supply to the remainder system.

Installation of Switchboard

Arrangement of switchboard in general

19.—(1) The general arrangement of a switchboard shall be as follows:

(a) all its parts which may have to be adjusted or handled shall be readily accessible;

(b) the course of a conductor shall be readily traced and a clearly drawn diagram of the connections shall be displayed near the switchboard;

(c) a conductor, not arranged for connection to the same system, shall be kept well apart and shall be readily distinguished; and

(d) a bare conductor shall be placed or protected so as to prevent danger from accidental contact.

(2) A rubber mat or approved material of suitable size and thickness shall be placed on the floor in front of every switchboard to prevent danger of electric shock to an operator.

(3) A switchboard having bare conductors so exposed that they may be touched, shall, if not located in an area set apart for the purpose thereof, be fenced or otherwise enclosed.

(4) No person, except a competent person or a person acting under the immediate supervision of a competent person, shall have access to any part of the switchboard.

(5) An apparatus appertaining to a switchboard and requiring handling shall be placed or arranged in such a manner that the same may be operated from the working platform of the switchboard, and any measuring instrument and indicator connected therewith shall be placed in such a manner that the same may be observed from the working platform.

(6) Where the apparatus, measuring instrument and indicator referred to in subrule (5) are operated or observed from any place, adequate precaution shall be taken to prevent danger.

Working on a switchboard

20. Before any work is commenced on a switchboard—

(a) the switchboard shall be made dead and the conductor earthed; or

(b) if the switchboard is arranged in such a manner that any conductor thereof can be made dead in section and separated by permanent or removable division or screen from any adjoining section of which the conductor is live, that section on which work has to be done shall be made dead and every conductor earthed.

Switchboard operating at high or extra high voltage

21. In a switchboard operating at high or extra high voltage—

(a) the conductor which is within the natural reach of a person standing on the working platform or in any switchboard passage way shall be placed or protected adequately to prevent danger;

(b) the metallic frame of any instrument shall be earthed;
and

- (c) the metal handle of a switch and any metal gear for operating the switch shall be earthed.

Underground Supply Line

Underground mains and connections

22.—(1) An underground supply line shall be continuously insulated and protected to the satisfaction of the Chief Electrical Inspector, and where it is attached to a bridge or culvert it shall be protected in such a manner as may be directed by the Chief Electrical Inspector.

(2) Subject to the State Roads Ordinance, 1994 [*Cap. 9*], and any other written law, the breaking up of a street, road or public place for the purpose of laying an underground main and the connections thereto and the refilling and making good thereof shall be carried out by the owner, management, licensee, or his servant or agent, as the case may be, in the manner as may be required by the relevant authority charged with the responsibility for matters relating to streets, roads or public places.

(3) Except for the purpose of making immediate repairs, no underground main shall be laid by the owner, management, licensee, or his servant or agent, as the case may be, in any road unless reasonable notice has been given to the relevant authority.

Joint, connection or termination

23.—(1) Any electrical joint, connection or termination shall be constructed and made to serve its purpose with regard to its conductivity, insulation, mechanical strength and mechanical protection.

(2) A joint, connection or termination of any cable shall be carried out by a Cable Joiner.

(3) The cable referred to in subrule (2) shall include—

(a) an impregnated paper-insulated cable, sheathed in lead or aluminium;

(b) an armoured cable with thermosetting insulation;

(c) a mineral-insulated cable;

(d) a polymeric-insulated cable;

(e) an oil-filled cable;

(f) a gas-pressure cable; and

(g) any other cable where the Director considers the jointing, connecting and terminating of such cable requires special skill.

[Am. Cap. A109]

(4) A joint of an armoured polyvinyl chloride insulated cable shall be carried out by a Cable Joiner.

Portable Apparatus

Portable apparatus in general

24.—(1) A flexible cable for portable apparatus shall be connected to the system by a permanent joint or a properly constructed plug and socket.

(2) A portable apparatus and its flexible cable shall be controlled by effective means suitably located and capable of making dead the apparatus.

(3) An exposed metallic part of a portable apparatus shall be earthed independently and any flexible metallic cover of the conductor shall be earthed.

(4) A portable apparatus which is exposed to the weather, or is within reach of any person normally working in the vicinity of a conducting floor, shall be of completely insulated construction or earthed, and where it is subject to accidental damage, it shall be further protected by an earthed guard.

(5) No portable lampholder shall be in metallic connection with the lamp guard or with any other exposed metallic part of a portable lamp which is not effectively earthed.

Portable apparatus on a dredge or floating structure

25.—(1) A portable inspection lamp used on a dredge or other floating structure, in a place normally exposed to the weather where the floor is liable to be wet, in any underground place or confined space such as the inside of a boiler, tank or pipe, or in other similar situation, shall be operated at a voltage not exceeding 50 volts between conductors.

(2) A portable apparatus used in any of the situations described in subrule (1) shall be connected to the main in such a manner that the voltage to earth of any part of the apparatus shall not exceed 50 volts.

(3) A portable apparatus suitable for use on 100 volts may be used and supplied with energy from a transformer having a 100 volts winding with the centre of the neutral point of the winding connected to earth.

Installation of Electric Sign

Electric sign

26.—(1) No circuit for an electric sign shall use voltage exceeding 7,500 volts to earth, measured on an open circuit.

(2) There shall be an effective means of disconnection or isolation so that repair and maintenance of an electric sign may be safely carried out.

(3) The switch normally used for controlling the circuit shall be of the double-pole type and of sufficient current rating.

(4) The switch referred to in subrule (3) shall be installed in an easily accessible position and shall be marked "SUIS KAWALAN" or "CONTROL SWITCH".

(5) Any exposed frame or metal part of an electric sign and any metal sheath or conduit enclosing a cable shall be effectively earthed.

(6) An Electric Sign Contractor who installs an electric sign shall notify the officer-in-charge of the local Fire Brigade before the electric sign is put into use.

Fireman's switch, notice and transformer

27.—(1) A fireman's switch shall be provided for—

- (a) any exterior electric sign; and
- (b) any interior electric sign,

which are unattended.

(2) The fireman's switch referred to in subrule (1) shall comply with the following requirements:

- (a) it shall be arranged so that it is capable of isolating the electric sign from all poles of the supply except from the neutral of a three-phase four-wire supply;

(b) it shall be painted red and near it shall be fixed a name-plate having the words "SUIS BOMBA" or "FIREMAN'S SWITCH" inscribed on it in white block capital letters and the "ON" and "OFF" position shall be clearly indicated with the "OFF" position at the top and all letterings shall be legible to a person standing on the ground;

(c) it shall be fixed in a conspicuous position reasonably accessible to a fireman and not more than 2700 millimetres from the ground;

(d) in respect of an exterior electric sign, the switch shall be directly below the electric sign or a notice indicating its position shall be placed directly below the electric sign and a name-plate shall be fixed near the switch so as to render it clearly distinguishable;

(e) in respect of an interior electric sign, the switch shall be on the main entrance to the building or in a position agreed to by the officer-in-charge of the local Fire Brigade;

(f) where more than one fireman's switch is installed in any one building, every such switch shall be clearly marked to indicate the electric sign or the section of the electric sign which it controls and the officer-in-charge of the local Fire Brigade shall be notified accordingly;

(g) a fireman's switch shall be provided with a lock or catch designed to prevent the switch from being inadvertently or accidentally returned to the "ON" position; and

(h) wherever practicable, an exterior electric sign on any one building shall be controlled by a single fireman's switch.

(3) A danger notice not less than 150 millimetres wide by 100 millimetres high made of suitable material with the lettering in red on a white background bearing the words “BAHAYA VOLTAN TINGGI” or “DANGER HIGH VOLTAGE” shall be fixed in a prominent position adjacent to an electric sign or to a transformer if it is not immediately adjacent to the same electric sign, and in the case of a portable electric sign, the notice shall be fixed to the transformer.

(4) A transformer used in an electric sign shall bear a name-plate showing the following:

- (a) the maker's name and address;
- (b) the maker's type designation;
- (c) open-circuit root mean square (r.m.s.) secondary voltage to core;
- (d) rated primary current;
- (e) rated primary voltage; and
- (f) frequency.

Steps to be taken by owner or management

28. The owner or management of an installation shall—

- (a) at all times maintain the electric sign to ensure adequate safety to obviate danger from arising; and
- (b) take adequate precautions to prevent any unauthorized person from coming into contact with any part of the electric sign.

Other Installations

Installation not in use

29. When any part of a system or an installation is not in use, that part shall be isolated from the source of energy and shall not be allowed to remain alive.

Power of Chief Electrical Inspector to make adjustment or alteration to installation

30. When an installation is found likely to cause undue interference with the supply of electricity to other consumers or other installations, the Director may require the owner, occupier or management of the installation to make adjustments or alterations to the installations or the operation of the electrical system to such an extent, as he considers necessary, to rectify the situation.

[Am. Cap. A109]

Installation for electric smelting, X-ray, etc.

31. Any installation for electric smelting or for any other electric metallurgical process or any X-ray installation shall be controlled and operated in such a manner as the Director may direct.

[Am. Cap. A109]

Installation in a place of public entertainment

32.—(1) In a place of public entertainment, any meter or main switch used in connection with the intake of electricity supply from a public licensee shall be installed in an enclosure of adequate size which shall be made of fire-resisting materials and shall be adequately ventilated and where the enclosure is located in open air, it shall be of weather-proof construction.

(2) The connection of a source of electricity supply to a projector switchboard, stage switchboard or other control board shall be easily accessible.

(3) Any part of a switch, circuit breaker or fuse and any conductor which is live shall be protected to prevent accidental contact with them.

(4) Any switchboard, fuse board, circuit breaker or other electrical regulating apparatus shall be installed in such a manner so as to prevent access by any person other than a competent person or a person under the immediate supervision of a competent person.

(5) An enclosed switch and circuit breaker, other than a lighting switch, shall have the "ON" and "OFF" positions clearly indicated.

(6) The switch, circuit breaker and fuse board shall be labelled to indicate clearly the circuits which they control.

(7) The use of a flexible cable for a portable apparatus shall be avoided and if it is unavoidable the cable used shall be kept as short as possible.

(8) In a projection room of a cinema—

(a) wiring for supply at different voltages shall be kept apart and distinct;

(b) a separate sub-circuit shall be provided for lighting and no apparatus other than the lights in the projection room shall be connected to the sub-circuit; and

(c) any projector, lantern, rectifier or transformer shall be controlled by a separate double pole switch located in a position which is easily accessible to the operator.

(9) Where a moving apparatus is arranged to be started or stopped from a point remote from the apparatus, a suitable isolating switch shall be installed close to the apparatus.

Installation on a dredge or floating structure

33.—(1) Any lighting installation on a dredge, floating structure or an offshore platform shall be arranged in such a manner that the voltage between any conductor and earth does not exceed 150 volts.

(2) Any lighting installation by means of any luminous discharge lamp including the fluorescent lamps on a dredge, floating structure or an offshore platform shall comply with the following provisions:

(a) the voltage between any two conductors shall not exceed 255 volts;

(b) any final circuit for supplying energy to a discharge lamp shall not have any other apparatus connected to it; and

(c) means shall be provided to ensure the immediate discharge of energy stored in capacitors when the supply of energy is disconnected.

Earthing of Installation

Earthing of metallic part, neutral point, etc.

34.—(1) Any metallic sheath, cover, handle, joint box, switch box, fuse box, switchgear frame, the frame bed plate of any generator, converter, rectifier and motor, the metallic case and core of any transformer, and the metallic frame and cover of any refrigerator, cooking stove and other electrical equipment including any domestic appliance, shall be effectively earthed.

(2) Any water pipe connected to a public water supply system shall not be used as a sole means of earthing.

(3) Any gas pipe shall not be used as a sole means of earthing.

(4) The neutral point of an alternating current system or the mid-point of a direct current system shall not be connected to earth at more than one point, except with the approval of the Chief Electrical Inspector.

(5) Where the neutral or mid-point of a system is not effectively earthed, an indicative and protective device shall be installed in order to avoid danger due to leakage of current to earth from a live conductor.

(6) Where approval of the Director has been obtained for the neutral conductor to be used as an earth conductor for earthing the frame of an electrical apparatus, the neutral conductor shall not be used as the return conductor for a single phase supply.

[Am. Cap. A109]

Method of earthing

35. In any installation a complete system of earthing conductors made of an acceptable material and having an adequate cross-sectional area with one or more earth plates, pipes or rods shall be provided. Such system of earthing conductors shall be connected to the earth and effectively maintained.

Protection against earth leakage current

36.—(1) For an installation in a place of public entertainment, protection against earth leakage current shall be afforded for any final circuit supplying energy to an equipment which is intended to provide service to the public or which is intended to be accessible to, used by or operated by the public by a residual current device having a rated residual operating current not exceeding 10 milliamperes.

(2) For an installation in a place where the floor is likely to be wet or where the wall or enclosure is of low electrical resistance, protection against earth leakage current shall be afforded for any final circuit supplying energy to any equipment, either individually or in a group, by a residual current device having a rated residual operating current not exceeding 10 milliamperes.

(3) For an installation where hand-held equipment, apparatus or appliance is used or is likely to be used, protection against earth leakage current shall be afforded for any final circuit, either individually or in a group, by a residual current device having a rated residual operating current not exceeding 30 milliamperes.

(4) For an installation, other than the installations mentioned in subrules (1), (2) and (3), protection against earth leakage current shall be afforded for any final circuit either individually or in a group by a residual current device having a rated residual operating current not exceeding 100 milliamperes unless:

- (a) for functional reasons it is impractical to provide the protection; or
- (b) it is unsafe or even dangerous to provide the protection.

General Requirements of Installation

Room for switchboard or equipment

37. Any part of an installation where the switchboard or equipment is installed in any premises—

- (a) shall be adequately lighted, ventilated and kept dry;
- (b) shall be free from obstruction to facilitate the safe working of the switchboard or equipment;
- (c) shall be of ample dimension to facilitate ample space for safe operation or maintenance; and
- (d) shall not be used for storage of any kind.

Notice

38.—(1) A standard notice displaying the words “DILARANG MASUK” or “DO NOT ENTER” shall be placed outside a place containing electrical equipment where unauthorized interference with the equipment may be expected and where such interference is dangerous.

(2) The notice referred to in subrule (1) shall be of suitable material, 350 millimetres wide and 240 millimetres high with the lettering in black on a white background and the words “DILARANG MASUK” or “DO NOT ENTER” shall be inscribed in capital letters in the middle, the inscription being 290 millimetres long and 30 millimetres high and the spacing of letters being 6 millimetres wide.

(3) A standard notice displaying the word “BAHAYA” or “DANGER” shall be placed in a conspicuous position near the switchboard.

(4) The notice referred to in subrule (3) shall be of suitable material, 240 millimetres wide and 350 millimetres high with the lettering in red on a white background, and at the top it shall bear a line of three conventional thunderbolts each 80 millimetres high and 6 millimetres wide at the broadest part, and below these the word “BAHAYA” or “DANGER” shall be inscribed in capital letters, the inscription being 190 millimetres long and 28 millimetres high and the spacing of letters being 6 millimetres wide.

(5) The notices under subrules (1) and (3) shall be legible and placed in conspicuous positions.

Instructions for treatment of electric shock

39.—(1) Instructions in the national language and English language as to the proper mode of treating a person suffering from electric shock shall be affixed to any installation, other than a domestic installation, where persons are normally employed and where electricity is generated, transformed or used.

(2) The owner, management or licensee of an installation, as the case may be, shall ensure that any person employed therein understands and is familiar with the instructions.

Fire extinguishers

40. Fire extinguishers shall be provided by the owner, management or licensee of an installation, other than a domestic installation, and the extinguishers shall be kept on the premises for use at any time.

Installation of Aerial Line

General conditions of aerial line

41. The following general conditions shall apply to an aerial line:

(a) A line conductor shall be of hard-drawn copper, cadmium copper, aluminium or steel-cored aluminium, or such other material as may be approved in writing by the Director.

[Am. Cap. A109]

(b) A line conductor, unless it is effectively insulated, shall be rendered inaccessible to the natural reach of a person in a building or any other place.

(c) The height of the line conductor shall be increased or its position altered in order to provide sufficient clearance for safety in accordance with its use.

(d) Effective means shall be provided to ensure that a line conductor is dead after it has fallen due to breakage or otherwise.

(e) Any metal work on supports other than a conductor, within 3048 millimetres of the ground wherever situated, shall be effectively earthed at each support or connected to a continuous overhead earth conductor which shall be effectively earthed at not less than four points in every 1.61 kilometres.

(f) Any stay wire under paragraph (e) shall be effectively earthed except where it is connected with any unearthed steel-work on wooden pole supports in which case it shall be insulated by means of an insulator placed in each stay wire at a height of not less than 3048 millimetres from the ground.

(g) A multiple-earth neutral shall not be installed except with the written approval of the Director and subject to such conditions as the Director may impose.

[Am. Cap. A109]

(h) A line conductor, other than a multiple-earth neutral, shall be attached to a suitable insulator carried on the support of wood, iron, steel or reinforced concrete.

(i) Every precaution shall be taken to prevent the corrosion of any metalwork and the deterioration of wooden poles and supports at or below the surface of the ground.

(j) A service line shall be connected to a line conductor at a point of support only and shall be fixed to an insulator on a consumer's premises.

(k) Adequate provision shall be made for any line conductor forming part of a system at different voltages, erected on the same pole or support, to—

(i) guard against danger to any person who works on the system; and

(ii) guard against the lower voltage system from danger caused by leakages, if any, arising from contact with the higher voltage system.

(l) An aerial line, including its supports and structural parts, and any electrical appliance or device belonging to or connected therewith, shall be regularly inspected and effectively maintained.

(m) Any owner, management or licensee, as the case may be, shall remove any aerial line upon ceasing to use it for transmission of energy.

(n) The factor of safety of a line conductor shall be—

(i) based on the breaking load and shall be calculated on the assumption that the line conductor is at a temperature of 21 degrees Celsius; and

(ii) the line conductor shall be simultaneously subjected to wind of 96.56 kilometres per hour at right angles to the line and this wind is to be taken as exerting a pressure equivalent to 0.05 gram per square millimetre calculated on the whole of the projected areas of the lines.

(o) The height from the ground of any line conductor or auxilliary earth wire in still air shall not, except with the written permission of the Director, be less than the height appropriate to the system voltage and situation indicated below:

[Am. Cap. A109]

Ground Clearance in Metres

<i>System voltage between conductors</i>	<i>Over roads</i>	<i>Other than over roads</i>	<i>In positions inaccessible to vehicular traffic</i>
Not exceeding 600 volts	5.49	5.18	4.57
Exceeding 600 volts but not exceeding 11,000 volts	5.79	5.49	4.88
Exceeding 11,000 volts but not exceeding 66,000 volts	6.10	6.10	5.18
Exceeding 66,000 volts but not exceeding 132,000 volts	6.70	6.70	5.79
Exceeding 132,000 volts but not exceeding 275,000 volts	7.00	7.00	7.00
Exceeding 275,000 volts	7.30	7.30	7.30

(p) Any insulated line conductor, operating at a voltage not exceeding low voltage, shall be terminated on the building at a height of not less than 3.74 metres from ground level where the normal use of the building does not result in danger of accidental contact with the line conductor by a person normally resident in, or employed in, or visiting the building.

(q) A line conductor shall not cross, over or under, any radio aerial, except with the written permission of the Director.

[Am. Cap. A109]

(r) Where an aerial line crosses, over or under or is in close proximity to any other aerial line, adequate clearance must be maintained, and where one of the aerial lines operates at high or extra high voltage, and the other aerial line at low voltage, suitable protection shall be provided to protect the low voltage line from danger due to excess voltage in the event of any contact between the two lines due to breakage of any line conductor of any of the aerial lines.

(s) At the point of crossing of any aerial lines under paragraph (r), protection shall be provided by an earthed cradle guard between the two aerial lines, and where the higher voltage line crosses over the low voltage line, the cradle guard shall not be erected on the lower voltage line supports and shall not be connected to any of the lower voltage line conductors or auxiliary earth conductors.

(t) A cradle guard under an aerial line shall be such that from the outermost wires on each side of the guard a line drawn upwards towards the centre of the guard at an angle of 45 degrees to the horizontal shall totally enclose the line conductors.

(u) A cradle guard shall be suitably backstayed where necessary, and in the event of breakage of any or all of the line conductors, the cradle guard shall support any fallen line conductor without serious deformation and without allowing the line conductor or the cradle guard wire to come into contact with the aerial line to be protected or any road underneath the guard.

(v) A cradle guard wire shall be of hard-drawn copper or galvanised stranded steel wire.

(w) The cradle guard shall be connected at both ends to effective earth plates or pipes and to the continuous earth wire, if provided, and the electrical resistance of the cradle guard to earth shall be maintained at a sufficiently low value to ensure the immediate operation of the protective devices controlling the circuit in the event of failure of insulation occurring between a line conductor and the cradle guard.

(x) Any cradle guard wire, including cross lacing, must be maintained in good order and sound condition and the resistance of each arrangement of cradle guard wires to earth must be maintained at a sufficiently low value so that, in the event of any contact occurring between a line conductor and a cradle guard wire, the line conductor shall be made dead.

(y) An aerial line may cross over a railway line provided that, in all cases, the prior written consent of the relevant authority has been obtained, and any such crossing shall be installed and protected in the manner prescribed in paragraphs (t), (u), (v), (w) and (x) and conforms with an instruction issued from time to time by Director or the relevant authority, as the case may be.

[Am. Cap. A109]

(z) No joint in a line conductor shall be made in any span of an aerial line which crosses over another aerial line or a telecommunication line, road, railway line or navigable waterway.

(A) Where the Director is satisfied that the installation of an aerial line is safe and reasonable secured, he may exempt, subject to any conditions as he may deem fit to impose, any person for the requirements of paragraphs (o) and (s).

[Am. Cap. A109]

Aerial line operating at low voltage

42. The following conditions shall apply to an aerial line operating at low voltage:

(a) an aerial line shall be protected from leakage in the following manner:

(i) in a case where metal poles are used, an earthed wire running from pole to pole and connected to the pole shall be used; or

(ii) in a case where wooden or concrete poles are used, a bonding wire connected to the supporting metalwork of all insulators and terminating at the lowest point shall be used; and

(iii) in all cases, the neutral shall be the lowest conductor of an aerial line;

(b) a line conductor may cross, over or under, any overhead telecommunication line, provided that the line is installed and protected in accordance with rule 41 (u), (v), (w), (x) and (y) and conforms with any instruction issued from time to time by the Director;

[Am. Cap. A109]

(c) the clearance between a line conductor and a building or structure, other than a substation, shall be maintained at not less than 2134 millimetres horizontally or not less than 2743 millimetres vertically unless the written permission of the Director has been obtained to provide for a different clearance;

[Am. Cap. A109]

(d) no person shall, without the lawful authority of the owner, management or licensee of the installation, as the case may be, undertake any work or engage in any activity within 2134 millimetres horizontally or 2743 millimetres vertically of any conductor.

Aerial line operating at high or extra high voltage

43. The following provisions shall apply to an aerial line operating at high or extra high voltage:

(a) any metalwork other than conductors, but including stays, shall be permanently and effectively earthed and for this purpose a continuous earth wire shall be provided and connected with earth at not less than four points in every 1.61 kilometres, the spacing between the points being as nearly equal as possible, or the metalwork shall be connected to an effective earthing device at each individual support;

(b) where an aerial line crosses over a road, a suitable cradle guard shall be erected in accordance with the requirements of rule 41 (u), (v), (w), (x) and (y) and the Director may in special circumstances exempt the owner, management or licensee of the installation, as the case may be, from having to comply with this rule;

[Am. Cap. A109]

(c) no aerial line shall be erected along a road without the prior approval in writing of the Director who may require special precautions and method of construction to be adopted;

[Am. Cap. A109]

(d) any line conductor operation at a voltage not exceeding 66,000 volts may cross over an overhead telecommunication line provided that the crossing is installed and protected in the manner required by rule 41 (u), (v), (w), (x) and (y) and conforms to any instruction issued from time to time by the Director or telecommunication authority;

[Am. Cap. A109]

(e) an aerial line support or structure shall be clearly and permanently marked with a number;

(f) an aerial line support or structure shall be numbered consecutively;

(g) adequate provision shall be made to prevent unauthorized climbing on any lattice steel tower or other types of aerial line support or structure;

(h) a danger notice of the standard pattern prescribed in rule 38(3) and (4) shall be fixed at each support or structure where an aerial line is erected along or across a road, canal, navigable river or railway or crosses over any other overhead conductor;

(i) the clearance between a line conductor and a building or structure, other than a substation, shall be maintained at not less than 4.57 metres unless the written permission of the Director has been obtained to provide for a different clearance;

[Am. Cap. A109]

(j) no person shall, without the lawful authority of the owner, management, or licensee of the installation, as the case may be, undertake any work or engage in any activity within 4.57 metres of a conductor;

(k) an aerial line conveying energy at high or extra high voltage shall not be laid or place parallel to or nearly parallel to any telecommunication line which is within 183 metres by direct measurement of the proposed route of the supply line:

Provided that the distance of 183 metres may be increased or reduced by the Director after considering the voltage to be used and all circumstances generally affecting each particular case;

[Am. Cap. A109]

(l) no person, other than a licensee, shall lay or place an aerial line conveying energy at high or extra high voltage within 9.15 metres of any open wire telecommunication line except with the written permission of the Director; and

[Am. Cap. A109]

(m) paragraph (l) shall not apply to any telecommunication line or apparatus installed in a building.

PART III
OPERATION

Examination of Competent Person

Appointment of Board of Examiners

44.—(1) A Board of Examiners (hereinafter referred to as “the Board”) for the purpose of holding examinations of competent persons shall consist of—

(a) the Director as Chairman;

[Am. Cap. A109]

(b) the Director of Public Works or his nominee;

(c) the Managing Director of Sarawak Electricity Supply Corporation or his nominee; and

(d) two other persons, with engineering qualifications, appointed by the Minister.

(2) A person appointed by the Minister under subrule 1(d) shall hold office for a term of not more than three years and shall be eligible for re-appointment, but the Minister may terminate such appointment without assigning any reason.

(3) The Board may, with the approval of the Minister, make rules to regulate its procedures or proceedings.

(4) The Board may appoint a secretary and assign to him such duties or functions as the Board may determine.

Application for examination to be made to the Board

45.—(1) Any Electrical Services Engineer, Competent Electrical Engineer, Electrical Supervisor, Chargeman, Wireman or Cable Jointer referred to in these Rules shall possess a valid Certificate of Competency appropriate to such category, with restrictions, if any, issued to him by the Director under these Rules.

[Am. Cap. A109]

(2) An application for an examination for a Certificate of Competency shall be made in writing in a manner to be determined by the Board.

(3) An application under subrule (2) shall be considered by the Board who shall decide whether the applicant is eligible for the examination and thereafter to notify the applicant of its decision.

Eligibility to become Electrical Services Engineer

46.—(1) A person, in order to be considered eligible to sit for the examination for a Certificate of Competency as an Electrical Services Engineer, shall satisfy the Board that he complies with the following conditions:

(a) that he is a Malaysian citizen;

(b) that he is a holder of a Certificate of Competency as a Competent Electrical Engineer issued under these Rules;

(c) that he has experience in carrying out the work in connection with maintenance and repair, overhaul and service, calibration, test and commission of equipment and location of cable faults; and

(d) that he is able to comply with any other conditions as the Board deems necessary.

(2) Before a Certificate of Competency as an Electrical Services Engineer is issued to a person, he shall attend a professional interview conducted by the Board and shall satisfy the Board that—

(a) he has sufficient knowledge of maintenance and repair, overhaul and service, calibration, test and commission of equipment, including the principles of operation of equipment used for generation, transmission, distribution, utilisation, protection and metering in electrical installations and energy efficiency management;

(b) he has sufficient knowledge of location of cable faults;

(c) he has sufficient knowledge of first aid, resuscitation and treatment of electric shock; and

(d) he has sufficient knowledge of the Ordinance and any rules made thereunder.

(3) The examination for a Certificate of Competency as an Electrical Services Engineer shall be based on a syllabus to be determined by the Board and shall be conducted partly by written answers to questions set and partly by viva voce.

(4) Notwithstanding subrules (1), (2) and (3), the Board may exempt, at its discretion, any person from any or all of the requirements necessary for the examination.

Eligibility to become Competent Electrical Engineer

47.—(1) A person, in order to be considered eligible to sit for the examination for a Certificate of Competency as a Competent Electrical Engineer, shall satisfy the Board that he complies with the following conditions:

(a) that he is a Malaysian Citizen;

(b) that he holds a Degree or the equivalent qualification to a degree in electrical engineering from a recognised university or institution;

(c) that he is a Professional Engineer in electrical engineering registered with the Board of Engineers under the Registration of Engineers Act 1967 [**Act 138**];

(d) that he has not less than five years working experience in an environment where electrical equipment is in operation and has had experience of controlling live equipment; and

(e) that he is able to comply with any other conditions as the Board deems necessary.

(2) Before a Certificate of Competency as a Competent Electrical Engineer is issued to a person, he shall attend a professional interview conducted by the Board and shall satisfy the Board that—

(a) he has sufficient knowledge of modern electrical engineering practice, including the principles of operation of equipment used for generation, transmission, distribution, utilisation, protection and metering in electrical installations and energy efficiency management;

(b) he has sufficient knowledge of first aid, resuscitation and treatment of electric shock; and

(c) he has sufficient knowledge of the Ordinance and any rules made thereunder.

(3) The examination for a Certificate of Competency as a Competent Electrical Engineer shall be based on a syllabus to be determined by the Board and shall be conducted partly by written answers to questions set and partly by viva voce.

(4) Notwithstanding subrules (1), (2) and (3), the Board may exempt, at its discretion, any person from any or all of the requirements necessary for the examination.

Eligibility to become Electrical Supervisor

48.—(1) A person, in order to be considered eligible to sit for the examination for a Certificate of Competency as an Electrical Supervisor, shall satisfy the Board that he complies with the following conditions:

(a) that he is a Malaysian citizen;

(b) that he is possession of a Diploma or the equivalent qualification to a Diploma in electrical engineering from a recognised institution;

(c) that he has not less than five years working experience in an environment where electrical equipment is in operation and has had experience of controlling live equipment; and

(d) that he is able to comply with any other conditions as the Board deems necessary.

(2) Before a Certificate as an Electrical Supervisor is issued to a person, he shall attend an interview conducted by the Board and shall satisfy the Board that—

(a) he has sufficient knowledge of modern electrical engineering practice, including the principles of operation of equipment used for generation, transmission, distribution, utilisation, protection and metering in electrical installations and energy efficiency management;

(b) he has sufficient knowledge of first aid, resuscitation and treatment of electric shock; and

(c) he has sufficient knowledge of the Ordinance and any rules made thereunder.

(3) The examination for a Certificate of Competency as an Electrical Supervisor shall be based on a syllabus to be determined by the Board and shall be partly by written answers to questions set and partly by viva voce.

(4) The examination for a Certificate of Competency as an Electrical Supervisor referred to in subrules (2) and (3) shall be conducted by the Board or caused to be conducted by the Board.

(5) Notwithstanding subrules (1), (2) and (3), the Board may exempt, at its discretion, any person from any or all of the requirements necessary for the examination.

Eligibility to become Chargeman

49.—(1) A person, in order to be considered eligible to sit for the examination for a Certificate of Competency as a Chargeman, shall satisfy the Board that he complies with the following conditions:

- (a) that he is a Malaysian citizen;
- (b) that he is not less than 20 years of age;
- (c) that he has the suitable educational qualification to be determined by the Board;
- (d) that he has not less than three years working experience in an environment where electrical equipment is in operation and has had experience of controlling live equipment; and
- (e) that he is able to comply with any other conditions as the Board deems necessary.

(2) Before a Certificate of Competency as a Chargeman is issued to a person, he shall attend an interview conducted by the Board and shall satisfy the Board that—

- (a) he understands the use of various types of equipment which are likely to come under his charge, and has sufficient knowledge to install and operate it without danger;
- (b) he has sufficient knowledge of first aid, resuscitation and treatment of electric shock; and
- (c) he has sufficient knowledge of the Ordinance and any rules made thereunder.

(3) The examination for a Certificate of Competency as a Chargeman shall be based on a syllabus to be determined by the Board and shall be partly by written answers to questions set and partly by viva voce and may include such practical tests as the Board deems necessary.

(4) The examination for a Certificate of Competency as a Chargeman referred to in subrules (2) and (3) shall be conducted by the Board or caused to be conducted by an institution to be accredited from time to time for the purpose by the Board.

(5) Notwithstanding subrules (1), (2) and (3), the Board may exempt, at its discretion, any person from any or all of the requirements necessary for the examination.

Eligibility to become Wireman

50.—(1) A person, in order to be considered eligible to sit for the examination for a Certificate of Competency as a Wireman, shall satisfy the Board that he complies with the following conditions:

- (a) that he is a Malaysian citizen;
- (b) that he is not less than 18 years of age;
- (c) that he has the suitable educational qualification to be determined by the Board;
- (d) that he has working experience in relation to electrical wiring for such period, to be determined by the Board, with an Electrical Installation Contractor or any recognised academic institution or Government department or agency; and
- (e) that he is able to comply with any other conditions as the Board deems necessary.

(2) Before a Certificate of Competency as a Wireman is issued to a person, he shall attend an interview conducted by the Board and shall satisfy the Board that—

- (a) he has sufficient knowledge and practical skill in the wiring of an installation;

(b) he has sufficient knowledge of first aid, resuscitation and treatment of electric shock; and

(c) he has sufficient knowledge of the Ordinance and any rules made thereunder.

(3) The examination for a Certificate of Competency as a Wireman shall be based on a syllabus to be determined by the Board and shall be partly by written answers to questions set and partly by viva voce and may include such practical tests as the Board deems necessary for the examination.

(4) The examination for a Certificate of Competency as a Wireman referred to in subrules (2) and (3) shall be conducted by the Board or caused to be conducted by an institution to be accredited from time to time for the purpose by the Board.

(5) Notwithstanding subrules (1), (2) and (3), the Board may exempt, at its discretion, any person from any or all of the requirements necessary for the examination.

Eligibility to become Cable Jointer

51.—(1) An applicant, in order to be considered eligible to sit for the examination for a Certificate of Competency as a Cable Jointer, shall satisfy the Board that he complies with the following conditions;

(a) that he is a Malaysian citizen;

(b) that he is not less than 20 years of age;

(c) that he has the suitable educational qualification to be determined by the Board;

(d) that he has not less than three years working experience in the jointing, connecting and terminating of cables; and

(e) that he is able to comply with any other conditions as the Board deems necessary.

(2) Before a Certificate of Competency as a Cable Joiner is issued to a person, he shall attend an interview conducted by the Board and shall satisfy the Board that he understands the jointing, connecting and terminating of various types of cables which are likely to come under his charge and has sufficient knowledge to carry out the work.

(3) The examination for a Certificate of Competency as a Cable Joiner shall be based on a syllabus to be determined by the Board and shall be partly by written answers to questions set and partly by viva voce and may include such practical tests as the Board deems necessary.

(4) The examination for a Certificate of Competency as a Cable Joiner referred to in subrules (2) and (3) shall be conducted by the Board or caused to be conducted by an institution to be accredited from time to time for the purpose by the Board.

(5) Notwithstanding subrules (1), (2) and (3), the Board may exempt at its discretion, any person from any or all of the requirements necessary for the examination.

Temporary registration of foreign person

52.—(1) Subject to these Rules and such conditions as the Board may think fit to impose, the Board may, upon payment of the fee prescribed in Part V of the Second Schedule, issue a temporary Certificate of Competency as a competent person to any foreign person.

(2) A foreign person may be considered for temporary issuance of the Certificate of Competency if he satisfies the Board that

(a) he possesses the necessary qualification and skill which is recognised for the practice of electrical engineering in the country where he normally practises;

(b) he possesses the necessary expertise and his physical presence is required in Sarawak; and

(c) he has the necessary work permit issued by the relevant authority.

(3) Notwithstanding subrule (2), before a person may be considered for the purpose of temporary registration as an Electrical Services Engineer or a Competent Electrical Engineer, he shall be registered temporarily as a Professional Engineer in Electrical Engineering with the Board of Engineers under the Registration of Engineers Act 1967 [**Act 138**].

(4) The Director may issue a temporary Certificate of Competency for a period not exceeding twelve months.

[Am. Cap. A109]

(5) A foreign person whose Certificate of Competency has expired may apply for renewal subject to these Rules and the Director may renew the Certificate as he deems fit.

[Am. Cap. A109]

(6) For the purpose of this rule, “foreign person” means a person who is not a citizen or a permanent resident of Malaysia.

Medical evidence of fitness

53. The Director may require medical evidence of physical and mental fitness, certified by a registered medical practitioner, to be produced by a person before a Certificate of Competency is issued to him.

[Am. Cap. A109]

Fee for examination, endorsement and replacement of Certificate of Competency/Certificate of Registration

54. A fee as prescribed in Part IV of the Second Schedule shall be charged for—

- (a) an examination for a Certificate of Competency/Certificate of Registration;
- (b) the endorsement of a Certificate of Competency/Certificate of Registration; and
- (c) the replacement of a Certificate of Competency/Certificate of Registration.

Restriction or endorsement of Certificate of Competency

55.—(1) The Director may at his discretion:

[Am. Cap. A109]

(a) restrict the use of a Certificate of Competency of any Electrical Services Engineer, Competent Electrical Engineer, Electrical Supervisor, Chargeman, Wireman or Cable Jointer to any type, class, duration or location of installation; or

(b) endorse a Certificate of Competency for a Wireman First Grade to authorize him to carry out any electric sign installation on the condition that he has shown sufficient knowledge and experience in carrying out the work to the satisfaction of the Board.

(2) The Director may make any other endorsement on any Certificate of Competency issued under these Rules as the Board deems necessary.

[Am. Cap. A109]

Form of Certificate of Competency

56. The Certificates of Competency as an Electrical Services Engineer, a Competent Electrical Engineer, an Electrical Supervisor, a Chargeman, a Wireman and a Cable Jointer shall be signed by the Director and shall be in Forms H, I, J, K, L and M respectively in the First Schedule.

[Am. Cap. A109]

Lost or damaged Certificate of Competency

57. Where a Certificate of Competency issued by the Director is lost, stolen, destroyed, mutilated or defaced, a replacement of the Certificate of Competency may be issued by the Director on production of a declaration that the original Certificate of Competency has been lost, stolen or destroyed or upon surrender of the mutilated or defaced original Certificate of Competency and upon payment of such fee as prescribed in Part IV of the Second Schedule.

[Am. Cap. A109]

Suspension and revocation of Certificate of Competency

58.—(1) The Director may, after conclusion of an enquiry under the Ordinance or on consideration of a judgement of a court or a finding in an enquiry of death held under the Criminal Procedure Code [Act 593], and if it appears necessary to the Chief Electrical Inspector so to do, suspend for such period as he may decide or revoke absolutely any Certificate of Competency issued under these Rules.

[Am. Cap. A109]

(2) The Director may suspend or revoke a Certificate of Competency issued under these Rules if the holder of the Certificate has obtained the Certificate by making or causing to be made a false or fraudulent declaration, certification or representation, either in writing or otherwise.

[Am. Cap. A109]

(3) The Director may endorse, suspend or revoke any Certificate of Competency issued under these Rules in a case of serious misconduct.

[Am. Cap. A109]

(4) For the purpose of subrule (3), "serious misconduct" means one or more of the following:

- (a) sleeping while on duty;
- (b) causing damage to equipment by careless operation;
- (c) causing danger to life by reckless or negligent operation;
- (d) causing damage to equipment by neglect to use safety devices provided;
- (e) causing danger to life by neglect to use safety devices provided;
- (f) being under the influence of alcohol or drugs or both whilst on duty;
- (g) making or causing to be made a false or fraudulent declaration, certification or representation, either in writing or otherwise; or
- (h) failing to carry out any duty prescribed in these Rules.

(5) When an Electrical Inspector has reason to believe that a person who holds a Certificate of Competency has committed an offence under the Ordinance or these Rules or any serious misconduct under these Rules and is no longer fit to hold the Certificate of Competency, he shall forthwith suspend the Certificate and refer the matter within fourteen days to the Director.

[Am. Cap. A109]

(6) On receipt of the matter referred to in subrule (5), the Director shall, within fourteen days, appoint a Committee consisting of a Chairman as his representative and two other Electrical Inspectors to be nominated by the Director to enquire into the alleged offence referred by the Electrical Inspector.

[Am. Cap. A109]

(7) The person whose Certificate of Competency has been suspended under subrule (5) shall be given the opportunity to defend himself against the alleged offence before the Committee.

(8) The Committee shall, within fourteen days from the date of its appointment, or such extended period as may be approved by the Director, forward its findings and recommendations to the Director who shall decide whether to endorse, or to suspend for such period, or to revoke absolutely, the Certificate of Competency issued under these Rules.

[Am. Cap. A109]

(9) A person who is aggrieved by the decision of the Director under subrule (8) may apply to the Minister for reconsideration of the matter. The application shall be made in writing within twenty-one days from the date when the decision of the Director is received by him and shall contain the grounds of grievance.

[Am. Cap. A109]

(10) The decision of the Minister on the matter referred to him under subrule (9) shall be final.

(11) A person, whose Certificate of Competency issued under these Rules has been revoked, shall not, after the date of the revocation, do any work, act or thing which under these Rules a person is allowed to do as a holder of such Certificate of Competency.

Competent Person

Competent person

59.—(1) The competent person to work, operate or be in control of any work or operation of an installation required by any owner, management or licensee of the installation, as the case may be, shall, unless exempted under rule 114 (2), be recommended by the following persons:

(a) where the installation operates at a voltage not exceeding 600 volts:

- (i) an Electrical Services Engineer;
- (ii) a Competent Electrical Engineer;
- (iii) an Electrical Supervisor; or
- (iv) a resident Competent Electrical Engineer;

(b) where the installation operates at a voltage exceeding 600 volts but not exceeding 132,000 volts:

- (i) an Electrical Services Engineer;
- (ii) a Competent Electrical Engineer; or
- (iii) a resident Competent Electrical Engineer; and

(c) where the installation operates at a voltage at or exceeding 132,000 volts, a resident Competent Electrical Engineer.

(2) The Electrical Services Engineer, Competent Electrical Engineer, resident Competent Electrical Engineer or Electrical Supervisor, as the case may be, in subrule (1) shall—

(a) recommend the competent person who shall work or operate or be in control of any work or operation and who shall be responsible for any person under his control; and

(b) obtain the approval from the Electrical Inspector of the competent person referred to in paragraph (a),

for the installation or equipment belonging to the owner, management or licensee.

(3) The owner, management or licensee of the installation or equipment shall comply with such recommendation as may be approved by the Electrical Inspector under subrule (2).

(4) In the event of a dispute between the owner, management or licensee of the installation or equipment and the Electrical Inspector as to the competent person required for the installation in subrule (2), the dispute shall be referred to and decided by the Director.

[Am. Cap. A109]

Competent person responsible for a public installation

60. Notwithstanding rule 59, the competent person required by a licensee of a public installation shall—

- (a) work, operate or be in control of the installation; and
- (b) be responsible for the work or operation in the installation of any person under his control.

Competent person on each shift

61. Where any installation or equipment is operated by two or more shifts, the competent person on each shift required by the owner, management or licensee of the installation or equipment, as the case may be, shall be as specified in rule 59.

Registration of competent person

62.—(1) Subject to these Rules, before a person holds a Certificate of Competency issued under these Rules and does any work, act or thing under these Rules in relation to his Certificate of Competency, he shall register himself with the Director.

[Am. Cap. A109]

(2) Registration under subrule (1) shall be made, and may be renewed, for twelve months on payment of the fees prescribed in Part V of the Second Schedule.

(3) A person, who holds one or more Certificates of Competency issued under these Rules, shall not allow such certificate or certificates, as the case may be, to be utilised by more than one employer, at any one time, except with the written permission of the Director.

[Am. Cap. A109]

(4) A person who holds a Certificate of Competency as an Electrical Services Engineer, Competent Electrical Engineer or Electrical Supervisor shall not do any work, act or thing under these Rules which a person is allowed to do as a holder of such Certificate of Competency if he is more than 75 years of age.

(5) A person who holds a Certificate of Competency as a Chargeman, Wireman or Cable Jointer shall not do any work, act or thing under these Rules which a person is allowed to do as a holder of such Certificate of Competency if he is more than 65 years of age.

(6) Notwithstanding subrules (4) and (5), the age limit of a person may be waived on a year to year basis at the discretion of the Director who may require medical evidence of the physical and mental fitness of the person certified by any registered medical practitioner.

[Am. Cap. A109]

(7) The owner, management or licensee of the installation, as the case may be, shall cause to register within seven days of employment or appointment any person who holds a Certificate of Competency issued under these Rules and shall inform the Chief Electrical Inspector in writing the name and qualification of the person.

[Am. Cap. A109]

(8) The owner, management or licensee of the installation, as the case may be, shall prepare a duty list to identify the work or operation of each competent person and the part of the installation which is to be under the responsibility of each competent person under his employment, and the duty list shall be acknowledged by the competent person and shall be produced on demand by an Electrical Inspector.

Competent person to connect switchboard, equipment, etc.

63.—(1) No switchboard, switchgear or equipment, except any electrical appliance, fitting or apparatus designed to be connected to an electrical socket outlet by means of a plug, shall be connected to an installation for the purpose of receiving energy unless the connection is carried out by or under the control of a competent person.

(2) Notwithstanding subrule (1), it shall not be unlawful for a person to replace any lamp in a domestic installation.

Competent persons to submit plans, drawings and specifications

64. The competent persons who shall, on request, prepare and submit plans, drawings and specifications are as provided in Part VI of the Second Schedule.

Regular Inspection By Competent Person

Installation to be visited and inspected by competent person

65. Without prejudice to any exemption under these Rules and subject to rule 66, an installation shall be visited and inspected by the competent person referred to in rule 66.

Competent person and frequency of visit and inspection

66.—(1) The competent person who is required to visit and inspect the installation shall be as follows:

(a) where the installation is operating at low voltage—

- (i) the Electrical Services Engineer;
- (ii) the Competent Electrical Engineer; or
- (iii) the Electrical Supervisor; and

(b) where the installation is operating at higher than low voltage—

- (i) the Electrical Services Engineer; or
- (ii) the Competent Electrical Engineer.

(2) The number of visits for the purpose of inspection by the competent person referred to in subrule (1) shall be as follows:

(a) for an installation not exceeding 600 volts and receiving energy via a switchgear rated at or above 100 amperes, the minimum number of visits for the purposes of inspection per month shall be one visit;

(b) for an installation exceeding 600 volts but not exceeding 11,000 volts, the minimum number of visits for the purpose of inspection per month shall be two visits; and

(c) for an installation exceeding 11,000 volts but not exceeding 132,000 volts, the minimum number of visits for the purpose of inspection per month shall be four visits:

Provided that in a place of public entertainment the frequency of inspection for the installation referred to in paragraph (a) shall be at least two inspections per month: and

Provided further that the Director may determine—

[Am. Cap. A109]

(i) in the interests of public safety, the number of inspections for an installation by a competent person shall be more than that prescribed in paragraph (a), (b) or (c); or

(ii) where he is satisfied that the installation is safe and reasonably secured, the number of inspections for the installation by a competent person shall be less than that prescribed in paragraph (a), (b) or (c).

Duty of Engineer or Supervisor to inspect and report

67.—(1) Any Electrical Services Engineer, Competent Electrical Engineer or Electrical Supervisor who is required to inspect an installation under rule 66 shall inspect the installation and shall record and direct all findings, recommendations and instructions to the and the owner, management or licensee of the installation, as the case may be.

[Am. Cap. A109]

(2) The Electrical Services Engineer, Competent Electrical Engineer or Electrical Supervisor shall submit to the owner, management or licensee of the installation, as the case may be, an inspection report of his findings, recommendations and instructions on the installation within one week of the inspection.

(3) The owner, management or licensee of an installation shall keep a book of all the records and reports made under subrules (1) and (2) and the book shall be open for inspection by an Electrical Inspector at all times.

(4) The Electrical Services Engineer, Competent Electrical Engineer or Electrical Supervisor shall submit to the Director an Inspection Certificate in Form G in the First Schedule within one week of the inspection of the installation.

[Am. Cap. A109]

Chief Electrical Inspector to determine number of visits

68. The Director shall determine the total number of visits in a month which can be performed by any Electrical Services Engineer, Competent Electrical Engineer or Electrical Supervisor for the purpose of inspection of any installation as provided in rule 66.

[Am. Cap. A109]

Duty to inform and to make good defects

69. Any Electrical Services Engineer, Competent Electrical Engineer or Electrical Supervisor inspecting an installation referred to in rule 66 (2), and being aware of any defect in the installation or any equipment therein which is likely to cause danger shall forthwith inform the owner, management or licensee of the installation to make good or remove the defects, and make a report immediately to the Director.

[Am. Cap. A109]

Registration of Electrical Services Contractor

Electrical Services Contractor

70.—(1) No person shall perform or carry out any maintenance and repair, overhaul and service, calibration, test and commission of any installation or equipment and location of cable faults unless he holds a valid Certificate of Registration as an Electrical Services Contractor issued under these Rules.

(2) The maximum voltage for any electrical work referred to in subrule (1) to be undertaken by an Electrical Services Contractor shall be limited to whatever operating voltage restriction that is in the Certificate of Competency of the Electrical Services Engineer who is in his employment.

(3) The Certificate of Registration for the Electrical Services Contractor shall be in Form N in the First Schedule and shall be valid for twelve months from the date of issue or renewal thereof.

Requirements for registration as an Electrical Services Contractor

71. No Certificate of Registration as an Electrical Services Contractor shall be issued or renewed thereof unless the is satisfied that—

[Am. Cap. A109]

(a) the person has registered his business with the Registrar of Business Names or Registrar of Companies as the case may be;

(b) the person employs on a full-time basis an Electrical Services Engineer, and nothing in this paragraph prohibits the same person to be the Electrical Services Engineer;

(c) the person has insurance coverage for his employees under the Employees' Social Security Act 1969 [**Act 4**]; and

(d) the person is in possession of testing equipment and instruments related to his work to be determined by the Director.

[Am. Cap. A109]

Information required for registration as an Electrical Services Contractor

72. Before issuing or renewing a Certificate of Registration for an Electrical Services Contractor, the Director shall require the person to submit the following information:

[Am. Cap. A109]

(a) the names and addresses of all partners in the case of a registered partnership, and of all directors, managers and shareholders in the case of registered company;

(b) the premises rented or owned for carrying on the business; and

(c) any other information as the Director deems necessary.

[Am. Cap. A109]

Fee for Certificate of Registration as an Electrical Services Contractor

73. A fee shall be paid for a Certificate of Registration as an Electrical Services Contractor and the renewal thereof at the rate prescribed in Part VII of the Second Schedule.

Registration of Electrical Installation Contractor

Electrical Installation Contractor

74.—(1) No person shall perform or carry out any electrical work unless he holds a valid Certificate of Registration as an Electrical Installation Contractor issued under these Rules.

(2) A Certificate of Registration as an Electrical Installation Contractor shall be in Form O in the First Schedule and shall be valid for twelve months from the date of issue or renewal thereof.

Requirements for registration as an Electrical Installation Contractor

75.—(1) All applications for registration shall be made in writing to the Director, who shall arrange for the examination of the applicant by the Board.

[Am. Cap. A109]

(2) No Certificate of Registration as an Electrical Installation Contractor shall be issued or renewed unless the Director is satisfied that—

[Am. Cap. A109]

(a) the person has suitable electrical knowledge and experience of electrical installation practice;

(b) the person has had at least five years' experience in the wiring of premises;

(c) the person has registered his business with the Registrar of Business Names or Registrar of Companies, as the case may be;

(d) the person employs on a full-time basis such number of Wireman relevant to the class of electrical installation work to which his Certificate of Registration relates;

(e) the person has insurance coverage for his employees under the Employees' Social Security Act 1969 **[Act 4]**; and

(f) the person is in possession of suitable equipment and instruments related to his work to be determined by the Director.

[Am. Cap. A109]

Information required for registration as an Electrical Installation Contractor

76. Before issuing or renewing a Certificate of Registration for an Electrical Installation Contractor, the Director shall require the person to submit the following information:

[Am. Cap. A109]

- (a) the names and addresses of all partners in the case of a registered partnership, and of all directors, managers and shareholders in the case of a registered company;
- (b) the premises rented or owned for carrying on the business; and
- (c) any other information as the Director deems necessary.

[Am. Cap. A109]

Classification of Electrical Installation Contractors

77.—(1) Certificates of Registration as an Electrical Installation Contractor shall be subject to such conditions, regarding the class of electrical installation work which may be undertaken by the holder thereof, as the Director may think fit to impose.

[Am. Cap. A109]

(2) An Electrical Installation Contractor may seek the approval of the Director in order to be upgraded from one class to another.

[Am. Cap. A109]

Fee for registration as an Electrical Installation Contractor

78. A fee shall be paid for a Certificate of Registration as an Electrical Installation Contractor and the renewal thereof at the rate prescribed in Part VIII of the Second Schedule.

Registration of Electric Sign Contractor

Electric Sign Contractor

79.—(1) No person shall perform or carry out any electric sign work unless he holds a valid Certificate of Registration as an Electric Sign Contractor issued under these Rules.

(2) A Certificate of Registration as an Electric Sign Contractor shall be in Form P in the First Schedule and shall be valid for twelve months from the date of issue or renewal thereof.

Requirements for registration as an Electric Sign Contractor

80. No Certificate of Registration as an Electric Sign Contractor shall be issued or renewed thereof unless the Director is satisfied that—

[Am. Cap. A109]

(a) the person has registered his business with the Registrar of Business Names or Registrar of Companies, as the case may be;

(b) the person employs on a full-time basis at least one Wireman First Grade, and nothing in this paragraph prohibits him to be the Wiremen First Grade;

(c) the person has insurance coverage for his employees under the Employees' Social Security Act 1969 [**Act 4**]; and

(d) the person is in possession of suitable equipment, testing equipment and instruments related to his work to be determined by the Director.

[Am. Cap. A109]

Information required for registration as an Electric Sign Contractor

81. Before issuing or renewing a Certificate of Registration for an Electric Sign Contractor, the Director shall require the person to submit the following information:

[Am. Cap. A109]

(a) the names and addresses of all partners in the case of a registered partnership and of all directors, managers and shareholders in the case of a registered company;

(b) the premises rented or owned for carrying on the business; and

(c) any other information as the Director deems necessary.

[Am. Cap. A109]

Fee for Certificate of Registration as an Electric Sign Contractor

82. A fee shall be paid for a Certificate of Registration as an Electric Sign Contractor and the renewal thereof at the rate prescribed in Part IX of the Second Schedule.

Registration of Electrical Repair Contractor

Electrical Repair Contractor

83.—(1) No person shall, in the course of or in connection with or for the purposes of any trade, business or profession carried on by him, perform or carry out any checking, servicing or repair of any electrical appliance unless he holds a valid Certificate of Registration as an Electrical Repair Contractor issued under these Rules.

(2) A Certificate of Registration for an Electrical Repair Contractor shall be in Form Q as prescribed in the First Schedule and shall be valid for twelve months from the date of issue or renewal thereof.

Requirements for registration as an Electrical Repair Contractor

84. No Certificate of Registration as an Electrical Repair Contractor shall be issued or renewed thereof unless the Director is satisfied that—

[Am. Cap. A109]

(a) the person has registered his business with the Registrar of Business Names or Registrar of Companies, as the case may be;

(b) the person employs on a full-time basis a Wireman Second Grade with sufficient experience in the repair and service of electrical appliances, and nothing in this paragraph prohibits him to be the Wireman Second Grade;

(c) the person has insurance coverage for his employees under the Employees' Social Security Act 1969 **[Act 4]**; and

(d) the person is in possession of suitable equipment, testing equipment and instruments related to his work to be determined by the Chief Electrical Inspector.

Information required for registration as an Electrical Repair Contractor

85. Before issuing or renewing a Certificate of Registration for an Electrical Repair Contractor, the Director shall require the person to submit the following information:

[Am. Cap. A109]

(a) the names and addresses of all partners in the case of a registered partnership and of all directors, managers and shareholders in the case of a registered company;

(b) the premises rented or owned for carrying on the business; and

(c) any other information as the Director deems necessary.

[Am. Cap. A109]

Fee for Certificate of Registration as an Electrical Repair Contractor

86. A fee shall be paid for a Certificate of Registration as an Electrical Repair Contractor and renewal thereof at the rate prescribed in Part X of the Second Schedule.

Registration of Switchboard Manufacturer

Switchboard Manufacturer

87.—(1) No person shall, in the course of or in connection with or for the purposes of any trade or business carried on by him, make any switchboard unless he holds a valid Certificate of Registration as a Switchboard Manufacturer issued under these Rules.

(2) A Certificate of Registration as a Switchboard Manufacturer shall be in Form R in the First Schedule and shall be valid for twelve months from the date of issue or renewal thereof.

Requirements for registration as a Switchboard Manufacturer operating at low voltage

88. No Certificate of Registration as a Switchboard Manufacturer for a switchboard operating at low voltage shall be issued or renewed thereof unless the Director is satisfied that—

[Am. Cap. A109]

(a) the person has registered his business with the Registrar of Business Names or Registrar of Companies, as the case may be;

(b) the person employs on a full-time basis at least one Wireman First Grade, and nothing in this paragraph prohibits him to be the Wireman;

(c) the person employs on a full-time basis at least one Chargeman with the relevant restriction to be determined by the Director, and nothing in this paragraph prohibits the person and the Chargeman to be one and the same person;

[Am. Cap. A109]

(d) the person has insurance coverage for his employees under the Employees' Social Security Act 1969 [**Act 4**]; and

(e) the person is in possession of suitable equipment, test equipment and instruments for testing of the switchboard.

Requirements for registration as a Switchboard Manufacturer operating at low voltage and higher than low voltage

89. No Certificate of Registration as a Switchboard Manufacturer for a switchboard operating at both low voltage and higher than low voltage shall be issued or renewed thereof unless the Director is satisfied that—

[Am. Cap. A109]

(a) the person has registered his business with the Registrar of Business Names or Registrar of Companies, as the case may be;

(b) the person employs on full-time basis at least one Wireman First Grade;

(c) the person employs on a full-time basis at least one Chargeman with the relevant restriction to be determined by the Director; and nothing in this paragraph prohibits the person, the Chargeman and Wireman First Grade as in paragraph (b) to be one and the same person;

[\[Am. Cap. A109\]](#)

(d) the person employs on a full-time basis at least one Professional Engineer in electrical engineering who is registered with the Board of Engineers under the Registration of Engineers Act 1967 [**Act 138**], and nothing in this paragraph prohibits the person to be the Professional Engineer;

(e) the person has insurance coverage for his employees under the Employees' Social Security Act 1969 [**Act 4**]; and

(f) the person is in possession of suitable equipment, test equipment and instruments for testing of the switchboard.

Information required for registration as a Switchboard Manufacturer

90. Before issuing or renewing a Certificate of Registration for a Switchboard Manufacturer the Director shall require the person to submit the following information:

[\[Am. Cap. A109\]](#)

(a) the names and addresses of all partners in the case of a registered partnership and of all directors, managers and shareholders in the case of a registered company;

(b) the premises rented or owned for carrying on the business; and

(c) any other information as the Director deems necessary.

[\[Am. Cap. A109\]](#)

Fee for Certificate of Registration as a Switchboard Manufacturer

91. A fee shall be paid for a Certificate of Registration as a Switchboard Manufacturer and the renewal thereof at the rate prescribed in Part XI of the Second Schedule.

Approval of Equipment

Certificate of Approval for equipment

92.—(1) No person shall manufacture, import, display, sell or advertise—

- (a) any domestic equipment;
- (b) any equipment which is usually sold direct to the general public; or
- (c) any equipment which does not require special skills in its operation,

unless the equipment is approved by the Director.

[Am. Cap. A109]

(2) A Certificate of Approval to manufacture, import, display, sell or advertise the equipment shall be in Form S in the First Schedule.

(3) A processing fee of twenty ringgit shall be charged for an application for a Certificate of Approval of any equipment.

(4) A fee shall be paid for the Certificate of Approval in subrule (2) and the renewal thereof at the rate prescribed in Part XII of the Second Schedule.

Marking or labelling of approved equipment

93. Where an equipment has been approved for manufacture, import, display, sale or advertisement by the Director, the person to whom a Certificate of Approval has been issued under rule 92 may be required by the Director to mark or label the equipment and he shall do so in the manner to be determined by the Director.

[Am. Cap. A109]

Samples of equipment to be delivered to Chief Electrical Inspector

94.—(1) Any application for a Certificate of Approval of any equipment referred to in rule 92 shall be made to the Director in the manner to be determined by the Director.

[Am. Cap. A109]

(2) The applicant shall deliver to the Director samples of the equipment in subrule (1) and such other information in connection therewith, including drawings, photographs, pamphlets and technical literature, as the Director may require.

[Am. Cap. A109]

(3) A sample delivered shall have attached or affixed thereto a label bearing the following particulars:

- (a) the full name of the applicant;
- (b) the nature of the equipment;
- (c) the energy efficiency of the equipment; and
- (d) the catalogue or type number of the manufacturer, or any other means of identifying the equipment.

(4) The Director shall not be liable for any loss or damage caused to any equipment delivered under subrule (2).

[Am. Cap. A109]

Test and modification before approval

95.—(1) The Director may cause one or more samples of the equipment in rule 94 to be examined and tested.

[\[Am. Cap. A109\]](#)

(2) Where the Director considers that the equipment examined and tested in subrule (1) is likely to cause danger, the person applying for approval thereof shall modify or alter the equipment to suit the Director requirements before submitting any further samples thereof.

[\[Am. Cap. A109\]](#)

Submission for test and seizure of dangerous equipment

96.—(1) The Director may at any time by notice in writing require a person who manufactures, imports, displays, sells or advertises any equipment to deliver, within such time as may be specified in the notice, samples of the equipment for examination and test thereof.

[\[Am. Cap. A109\]](#)

(2) If any equipment is, in the opinion of the Director, unsafe or dangerous or likely to become unsafe or dangerous to use, the Director may prohibit the manufacture, import, display, sale or advertisement of the equipment and may direct the person in subrule (1) to withdraw immediately all the equipment from use or sale and where necessary may seize and remove such equipment.

[\[Am. Cap. A109\]](#)

(3) The Director shall not be liable for any loss or damage caused to any equipment delivered or seized and removed under subrule (1) or (2), as the case may be.

[\[Am. Cap. A109\]](#)

Renewal, Transfer, Cancellation, Removal and Reinstatement

Renewal of Certificate of Registration

97. The renewal of any Certificate of Registration issued under rule 70, 74, 79, 83 or 87 shall be made before the date of expiry of the Certificate.

Transfer of Certificate of Registration

98.—(1) No Certificate of Registration issued under rule 70, 74, 79, 83 or 87 shall be transferred by the holder of the Certificate to any other person except with the written permission of the Director.

[Am. Cap. A109]

(2) The holder of any Certificate of Registration issued under rule 70, 74, 79, 83 or 87 shall obtain approval from the Director in writing for any change of name or address in connection with the business and the Certificate of Registration shall be amended or replaced upon such change of name or address without payment of any fee.

[Am. Cap. A109]

Cancellation of Certificate of Registration

99.—(1) The Director may cancel a Certificate of Registration issued under rule 70, 74, 79, 83 or 87 if—

[Am. Cap. A109]

(a) the holder of the Certificate ceases to carry on the business in respect of which he is registered;

(b) the holder of the Certificate has been adjudicated a bankrupt;

(c) the business goes into liquidation;

(d) the holder of the Certificate or his servant or agent contravenes or fails to comply with any provisions of the Ordinance or these Rules; or

(e) the holder of the Certificate has obtained the Certificate by making or causing to be made any false or fraudulent declaration, certification or representation, either in writing or otherwise.

(2) Where a Certificate of Registration is cancelled by the Director pursuant to subrule (1), the Certificate shall be returned to the Director by the person, to whom the Certificate was issued, within fourteen days of the person being notified in writing of the cancellation.

[Am. Cap. A109]

Removal from and reinstatement to the Register of Certificate of Registration

100.—(1) There shall be removed from the Register the name and other particulars of any person whose Certificate of Registration was issued under rule 70, 74, 79, 83 or 87—

(a) where he has failed to renew his registration on the date of expiry thereof; or

(b) where his registration has been cancelled under rule 99.

(2) A person whose name has been removed from the Register under subrule (1) may appeal, within thirty days of the removal from the Register, for the reinstatement thereof and the Director, upon receipt of satisfactory evidence or reasons for his reinstatement, may register him again.

[Am. Cap. A109]

(3) The person referred to in subrule (2) who feels aggrieved by the decision of the Director not to reinstate him may apply to the Minister for re-consideration of the matter.

[Am. Cap. A109]

(4) The application under subrule (3) shall be made in writing within twenty-one days from the date of the decision of the Director and shall contain the grounds of grievance.

[Am. Cap. A109]

(5) The decision of the Minister on the matter referred to him under subrule (3) shall be final.

(6) Upon any reinstatement, the fee for initial registration and any other fees in arrears as prescribed in the Second Schedule shall be paid by the person referred to in subrule (2).

Renewal of Certificate of Approval

101. Renewal of a Certificate of Approval issued under rule 92 shall be made not less than two months before the date of expiry of the Certificate.

Transfer of Certificate of Approval

102.—(1) No Certificate of Approval issued under rule 92 shall be transferred by the holder of the Certificate to any other person except with the written permission of the Director.

[Am. Cap. A109]

(2) The holder of a Certificate of Approval issued under rule 92 shall obtain approval from the Director in writing for any change of name or address in connection with the business and the Certificate shall be amended or replaced upon such change of name or address without payment of any fee.

[Am. Cap. A109]

Cancellation of Certificate of Approval

103.—(1) The Director may cancel a Certificate of Approval issued in respect of any equipment referred to in rule 92 if—

[Am. Cap. A109]

(a) the equipment is found to be unsafe for use upon any examination or test thereof;

(b) the person to whom the Certificate was issued, uses it for a purpose different from that for which it was issued or in a manner calculated to mislead or deceive the public;

(c) the person has contravened or failed to comply with any of the provisions of the Ordinance or these Rules; or

(d) the holder of the Certificate has obtained the Certificate by making or causing to be made any false or fraudulent declaration, certification or representation, either in writing or otherwise.

(2) Where a Certificate of Approval is cancelled by the Director pursuant to subrule (1), the Certificate shall be returned to the Director by the person to whom the Certificate was issued within 14 days of the person being notified in writing of the cancellation.

[Am. Cap. A109]

Removal from and reinstatement to the Register of Certificate of Approval

104.—(1) There shall be removed from the Register the name and other particulars of any person whose Certificate of Approval was issued under rule 92—

(a) where he has failed to renew his registration on the date of expiry thereof; or

(b) where his registration has been cancelled under rule 103.

(2) A person whose name has been removed from the Register under subrule (1) may appeal, within thirty days of the removal from the Register, for the reinstatement thereof and the Director, upon receipt of satisfactory evidence or reasons for his reinstatement, may register him again.

[Am. Cap. A109]

(3) The person referred to in subrule (2) who feels aggrieved by the decision of the Director not to reinstate him, may apply to the Minister for re-consideration of the matter.

[Am. Cap. A109]

(4) The application under subrule (3) shall be made in writing within twenty-one days from the date of the decision of the Director and shall contain the grounds of grievance.

[Am. Cap. A109]

(5) The decision of the Minister on the matter referred to him under subrule (3) shall be final.

(6) Upon any reinstatement, the fee for initial registration and any outstanding payments as prescribed in the Second Schedule shall be paid by the person referred to in subrule (2) and the registration shall be valid for twelve months thereof.

PART IV
MAINTENANCE

Maintenance of Installations

Inspection and test for the purpose of maintenance of installation, etc.

105.—(1) An installation shall be maintained in good and working order and safety precautions shall be observed at all times to prevent danger.

(2) The responsibility to maintain the installation in the manner required in subrule (1) shall be with the owner, management, licensee or occupier of the installation, his servant or agent, as the case may be.

(3) An installation, other than a domestic installation, shall be checked and tested by a competent person referred to in rule 66(1) at least once in every five years, or at any time as directed by the Director.

[Am. Cap. A109]

(4) Any protective relay and device of an installation shall be checked, tested and calibrated by a competent person referred to in rule 66(1) at least once in every two years, or at any time as directed by the Director.

[Am. Cap. A109]

(5) The Electrical Inspector may inspect an installation or the premises where an installation is located if he thinks it is desirable to do so in the interest of the public or for public safety and if a notice in writing is given to the owner, management or licensee of an installation or any premises, as the case may be, shall cause the person in charge of the installation or premises to attend and give such assistance as may be ordered by the Electrical Inspector in the notice.

Competent person to undertake maintenance work

106. No person, except a competent person or a person acting under the control of a competent person, shall undertake to carry out any repair, replacement, servicing or cleaning of any equipment which forms part of an installation.

Adequate safety precautions to be taken during work

107.—(1) A competent person shall take adequate precautions to prevent any installation or equipment from being accidentally or inadvertently made alive when persons are working.

(2) Any person engaged in work in connection with any installation or equipment shall be adequately protected from danger, and the responsibility for such protection shall be on the licensee, owner, management or occupier of the installations, his servant or agent, as the case may be.

(3) Where any person is engaged in work on a circuit controlled by a switch not under his immediate supervision, the switch shall be locked in the “OFF” position until the work is finished; and

—
(a) in the case of aerial work, a notice shall be hung on the switch and earthing sticks to provide earthing shall be fixed at a visible distance from the workmen; and

(b) in the case of underground cabling work, a suitable notice shall be hung on the switch, to warn any person that there are persons at work on the circuit and that the switch shall not be re-closed.

(4) If the circuit is operated at high voltage or extra high voltage, the switch in subrule (3) shall be locked in the “OFF” position by the competent person.

(5) No competent person or person under the control of a competent person shall reclose any switch until he is certain that all persons are clear of the circuit concerned and have been warned that the circuit is to be made alive.

(6) No person shall defeat, remove or damage a safety device fitted in connection with or for use with any installation or equipment.

Competent person to issue written instruction

108. No work or operation under the control of a competent person shall be commenced until a written instruction has been issued by the competent person to the person under his control.

PART V

MISCELLANEOUS

Electrical Inspector's identity card

109. The official identification card or badge which the Electrical Inspector shall carry under section 13 (2) of the Ordinance shall be in Form T in the First Schedule.

Special order by Director

110. Where it appears to the Director that it is necessary in order to secure a reasonable degree of safety—

[Am. Cap. A109]

(a) to take precautions in the working or operation of an apparatus; or

(b) to make additions or alterations to an apparatus,

he shall issue an order in writing and the order shall be carried into effect by the owner, management or licensee of any installation, contractor, manufacturer, distributor or retailer to whom the order is addressed.

Prohibition of use of equipment dangerous to health

111.—(1) No person shall use, work or operate any equipment which is, in the opinion of the Director of Health, Sarawak, hazardous or dangerous to the health of the persons in attendance thereof or to the public.

(2) The Director shall issue directions to any person concerned to secure the due compliance of subrule (1).

[Am. Cap. A109]

(3) The Director may prohibit the use of any equipment by a person which is, in his opinion, causing or likely to cause nuisance to the public.

[Am. Cap. A109]

Fees payable to Director

112. Any fees payable under the Ordinance or these Rules shall be paid in advance to the Director and shall not be refundable under any circumstances.

[Am. Cap. A109]

Licensee to keep records

113. All licensees shall keep record of the following matters and shall produce them within the specified time as required by the Director:

[Am. Cap. A109]

(a) the maximum daily load and energy sold per month;

(b) the breakdown of any installation and the occurrence of any accident, fatal or otherwise;

- (c) the class, operating voltage and capacity of all consumers;
- (d) the units generated by a generating station, the plant capacity and the maximum load; and
- (e) any other information as the Director deems necessary.

[Am. Cap. A109]

Exemptions

114.—(1) The Director may grant exemption to any person from the requirements of rule 7, other than the following person:

[Am. Cap. A109]

(a) a person who possesses or operates an installation which receives energy from a licensee and has a generator connected thereto for the purpose of providing standby energy in the event of failure of the primary source of energy; or

(b) a person who possesses or operates an installation which receives energy from a licensee at a voltage of 11,000 volts or more.

(2) The Director may grant exemption to any person from the requirements of rule 59 other than a person who works or operates or in control of—

[Am. Cap. A109]

- (a) any licensed private installation;
- (b) any installation or electrical plant equipment which operates at voltage higher than low voltage;
- (c) any installation or electrical plant equipment which operates at low voltage and receives energy via a switchgear of rating of 100 amperes or more; or

(d) any installation or electrical plant equipment which generates more than 5 kilowatts of energy.

Transitional and saving provisions

115. On the coming into force of these Rules—

(a) any installation or equipment in operation the design or construction of which does not comply with these Rules shall be altered so as to make it comply with these Rules within such reasonable time as the Director may direct;

[Am. Cap. A109]

(b) any Certificate of Registration for any Electrical Installation Contractor and Switchboard Manufacturer shall be renewed in compliance with these Rules within two years from the date when the renewal of the registration is due;

(c) any registration of competent persons shall be renewed in accordance with these Rules within two years from the date when the renewal of the registration is due;

(d) any person who has been given approval to sit for his examination for his Certificate of Competency shall be deemed to be eligible to sit for the examination under these Rules;

(e) any application for the following and any application for the renewal thereof, and which is still pending before the coming into force of these Rules, shall be deemed to have been made under these Rules, and may be continued to be processed under these Rules:

(i) a Certificate of Competency as a Wireman;

(ii) a Certificate of Registration as an Electrical Installation Contractor; and

(iii) a Certificate of Registration as a Switchboard Manufacturer;

(f) any inspection, investigation or enquiry made under and which is still pending before the coming into force of these Rules shall be deemed to have been conducted under these Rules and may be continued under these Rules; and

(g) any findings and consequential verdicts henceforth resulting from any inspection, investigation or enquiry carried out under any written law shall be upheld under these Rules.

Penalty

116. Unless otherwise made an offence under the Ordinance, a person who contravenes or fails to comply with any of the provisions of these Rules shall be guilty of an offence and shall, on conviction, be liable to a fine not exceeding ten thousand ringgit and, in the case of a continuing offence, to a fine not exceeding eight hundred ringgit for every day or part of a day during which the offence continues after conviction.

Revocation

117. The Electricity Rules [**Vol. VIII, p. 645**] are revoked.

FIRST SCHEDULE

ELECTRICITY ORDINANCE

ELECTRICITY RULES, 1999

FORM A

(Rule 3)

**APPLICATION FOR A LICENCE TO USE, WORK OR OPERATE AN
ELECTRICAL GENERATING INSTALLATION OR TO SUPPLY
ENERGY UNDER SECTION 4 OF THE ELECTRICITY ORDINANCE
(CAP. 137 (1958 ED.))**

1. Name of Applicant (BLOCK LETTERS):
Address
.....
2. Details of Plant:
Generating Capacity: Kilowatts
Phases: Volts: Frequency: Hz
Engine Horse Power: R.P.M.:
Made by:
3. Plant Located at: (Town)
On Land Lot(s) No.
and details of installation are enclosed.
Signature of Applicant:
Date:

FOR OFFICIAL USE ONLY

4. Comments From SESCO:

.....
Managing Director,
Sarawak Electricity Supply Corporation

Date:

ELECTRICITY ORDINANCE

ELECTRICITY RULES, 1999

FORM B

(Rule 7)

APPLICATION FOR REGISTRATION OF AN INSTALLATION

I/We,,

the owner/management of the installation

.....
at

....., hereby apply for a
Certificate of Registration for the installation under rule 7 of the Electricity Rules,
1999.

The installation consists of the following apparatus*.

.....
Owner/Management

* This list is to contain full details of the apparatus on which the fee is to be
assessed as prescribed in Part II of the Second Schedule, together with any other
apparatus.

If the list is unduly long, it may be given on a separate sheet or sheets of paper
attached to this application.

ELECTRICITY ORDINANCE

ELECTRICITY RULES, 1999

FORM C

(Rule 7(2))

CERTIFICATE OF REGISTRATION

INSTALLATION NO.

I, ,
an Electrical Inspector duly appointed under the Electricity Ordinance (*Cap. 137*
(1958 Ed.)), hereby certify that the installation
at
.....
the property of
has satisfied the requirements of the Electricity Rules, 1999.

Now, therefore, I certify that the above-mentioned installation has been
registered by me, and this Certificate of Registration shall be valid for the period of
twelve months from the date hereunder.

Fee RM: Aggregate capacity installed: kilowatts

Date of issue:

Place:

.....
Director,
Sarawak

[Am. Cap. A109]

ELECTRICITY ORDINANCE

ELECTRICITY RULES, 1999

FORM D

(Rule 7(3))

RENEWAL OF CERTIFICATION OF REGISTRATION

INSTALLATION NO.

The registration of the installation
at
the property of ,
is hereby renewed for a period twelve months from the date hereunder.

Fee RM: Aggregate capacity installed: kilowatts

Date of renewal:

Place:

.....
Director,
Sarawak

[Am. Cap. A109]

ELECTRICITY ORDINANCE

ELECTRICITY RULES, 1999

FORM E

(Rule 8(3))

NOTICE OF INITIAL INSPECTION

To:
of

The notice of completion of your installation at

.....
.....
has been received on the day of, You are
hereby notified that an inspection and test thereof will be made on the
day of, at a.m./p.m. and that the person who
is in charge of the said installation is required to be present during the inspection and
test and to give such assistance as may be required.

Date:

Place:

.....
Director,
Sarawak

[Am. Cap. A109]

ELECTRICITY ORDINANCE

ELECTRICITY RULES, 1999

FORM F

(Rule 8(3))

NOTICE OF FOLLOW-UP INSPECTION

To:
of

You are hereby notified that an inspection and test of your installation
at
will be made on the day of , at a.m./p.m.
and that the person in charge of the said installation is required to be present during
the inspection and test and to give such assistance as may be required.

Date:

Place:

.....
Director,
Sarawak

[Am. Cap. A109]

ELECTRICITY ORDINANCE
ELECTRICITY RULES, 1999

FORM G

(Rule 67)

INSPECTION CERTIFICATE

To: Director, Sarawak

PART 1: DETAILS OF THE INSTALLATION

Client:

Address:

No. of Shifts:

Voltage:

Ampere:

PART 2: VISIT AND INSPECTION

I, being the competent person responsible (as indicated by my signature below) for the visit and inspection of the above installation in Part 1, CERTIFY that the above installation for which I am responsible and have visited and inspected on is to the best of my knowledge and belief in accordance with the Electricity Rules, 1999, except for the defects and departures, if any, stated in Part 3 of this Certificate.

The installation is safe for its operation.

The extent of liability of the signatory is limited to the installation described above in Part 1 as the subject of this Certificate.

For the Visit and Inspection of the installation:

Name (In Block Letters):

Certificate of Competency No:

For and on behalf of:

Address:

Signature:

Date:

[Am. Cap. A109]

PART 3: DEFECTS AND DEPARTURES

- (1) The following departures from the Electricity Rules, 1999, have been brought to the notice and attention of the owner, management or licensee of the installation in writing for his due compliance:
 - (a)
 - (b)
 - (c)
 - (d)
- (2) The following defects which are likely to cause danger have been brought to the notice and attention of the owner, management or licensee of the installation in writing for him to make good or rectify:
 - (a)
 - (b)
 - (c)
 - (d)
- (3) The following defects which are likely to cause danger have been isolated or removed:
 - (a)
 - (b)
 - (c)
 - (d)

NOTES:

1. The Inspection Certificate required by rule 67 of the Electricity Rules, 1999, shall be made out and signed by a competent person in respect of the visit and inspection of the installation.
2. This Certificate will indicate the responsibility for visit and inspection of the installation.
3. When making out and signing a certificate on behalf of a company or other business entity, an individual shall state for whom he is acting.
4. Additional certificate may be required as clarification for larger or complicated installation.
5. The signature appended is that of a competent person authorized by the company executing the visit and inspection of the installation.

6. The page numbers of each sheet should be indicated together with the total number of the sheets involved.
7. The voltage and amperes stated in Part 1 shall be that of connected system voltage of the licensee or supply authority and the total amperes consumed by the installation respectively.

Certificate No.:

ELECTRICITY ORDINANCE
ELECTRICITY RULES, 1999

FORM H

(Rule 56)

**CERTIFICATE OF COMPETENCY
AS AN ELECTRICAL SERVICES ENGINEER**

Name:

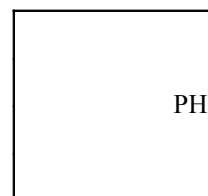
Holder's Identity Card No.: Holder's Date of Birth:

having been examined and found to possess the qualifications prescribed by the Electricity Rules, 1999, made under the Electricity Ordinance (*Cap. 137 (1958 Ed.)*), this Certificate of Competency as an Electrical Services Engineer is hereby issued to him and shall not be used by any other person.

RESTRICTION, IF ANY:

PLACE:

DATE:



PHOTO

.....
Holder's signature

.....
*Director,
Sarawak*

VALID FOR ONE YEAR. DATES OF RENEWAL OVERLEAF

In the event of this Certificate coming into the possession of any person other than the person to whom it has been issued, it shall be returned forthwith to Director, Sarawak.

[Am. Cap. A109]

Certificate No.:

ELECTRICITY ORDINANCE
ELECTRICITY RULES, 1999

FORM I

(Rule 56)

**CERTIFICATE OF COMPETENCY
AS A COMPETENT ELECTRICAL ENGINEER**

Name:

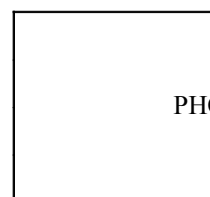
Holder's Identity Card No.: Holder's Date of Birth:

having been examined and found to possess the qualifications prescribed by the Electricity Rules, 1999, made under the Electricity Ordinance (*Cap. 137 (1958 Ed.)*), this Certificate of Competency as a Competent Electrical Engineer is hereby issued to him and shall not be used by any other person.

RESTRICTION, IF ANY:

PLACE:

DATE:



PHOTO

.....
Holder's signature

.....
*Director,
Sarawak*

VALID FOR ONE YEAR. DATES OF RENEWAL OVERLEAF

In the event of this Certificate coming into the possession of any person other than the person to whom it has been issued, it shall be returned forthwith to Director, Sarawak.

[Am. Cap. A109]

Certificate No.:

ELECTRICITY ORDINANCE
ELECTRICITY RULES, 1999

FORM J

(Rule 56)

**CERTIFICATE OF COMPETENCY
AS AN ELECTRICAL SUPERVISOR**

Name:

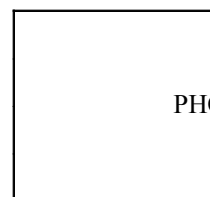
Holder's Identity Card No.: Holder's Date of Birth:

having been examined and found to possess the qualifications prescribed by the Electricity Rules, 1999, made under the Electricity Ordinance (*Cap. 137 (1958 Ed.)*), this Certificate of Competency as an Electrical Supervisor is hereby issued to him and shall not be used by any other person.

RESTRICTION, IF ANY:

PLACE:

DATE:



PHOTO

.....
Holder's signature

.....
*Director,
Sarawak*

VALID FOR ONE YEAR. DATES OF RENEWAL OVERLEAF

In the event of this Certificate coming into the possession of any person other than the person to whom it has been issued, it shall be returned forthwith to Director, Sarawak.

[Am. Cap. A109]

Certificate No.:

ELECTRICITY ORDINANCE
ELECTRICITY RULES, 1999

FORM K

(Rule 56)

**CERTIFICATE OF COMPETENCY
AS A CHARGEMAN**

Name:

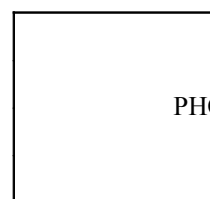
Holder's Identity Card No.: Holder's Date of Birth:

having been examined and found to possess the qualifications prescribed by the Electricity Rules, 1999, made under the Electricity Ordinance (*Cap. 137 (1958 Ed.)*), this Certificate of Competency as a Chargeman is hereby issued to him and shall not be used by any other person.

RESTRICTION, IF ANY:

PLACE:

DATE:



PHOTO

.....
Holder's signature

.....
*Director,
Sarawak*

VALID FOR ONE YEAR. DATES OF RENEWAL OVERLEAF

In the event of this Certificate coming into the possession of any person other than the person to whom it has been issued, it shall be returned forthwith to Director, Sarawak.

[Am. Cap. A109]

Certificate No.:

ELECTRICITY ORDINANCE
ELECTRICITY RULES, 1999

FORM L

(Rule 56)

**CERTIFICATE OF COMPETENCY
AS A WIREMAN**

Name:

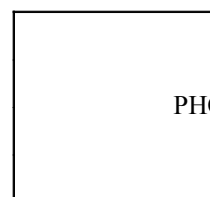
Holder's Identity Card No.: Holder's Date of Birth:

having been examined and found to possess the qualifications prescribed by the Electricity Rules, 1999, made under the Electricity Ordinance (*Cap. 137 (1958 Ed.)*), this Certificate of Competency as a Wireman is hereby issued to him and shall not be used by any other person.

RESTRICTION, IF ANY:

PLACE:

DATE:



PHOTO

.....
Holder's signature

.....
*Director,
Sarawak*

VALID FOR ONE YEAR. DATES OF RENEWAL OVERLEAF

In the event of this Certificate coming into the possession of any person other than the person to whom it has been issued, it shall be returned forthwith to Director, Sarawak.

[Am. Cap. A109]

Certificate No.:

ELECTRICITY ORDINANCE
ELECTRICITY RULES, 1999

FORM M

(Rule 56)

**CERTIFICATE OF COMPETENCY
AS A CABLE JOINTER**

Name:

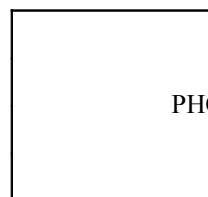
Holder's Identity Card No.: Holder's Date of Birth:

having been examined and found to possess the qualifications prescribed by the Electricity Rules, 1999, made under the Electricity Ordinance (*Cap. 137 (1958 Ed.)*), this Certificate of Competency as a Cable Jointer is hereby issued to him and shall not be used by any other person.

RESTRICTION, IF ANY:

PLACE:

DATE:



PHOTO

.....
Holder's signature

.....
*Director,
Sarawak*

VALID FOR ONE YEAR. DATES OF RENEWAL OVERLEAF

In the event of this Certificate coming into the possession of any person other than the person to whom it has been issued, it shall be returned forthwith to Director, Sarawak.

[\[Am. Cap. A109\]](#)

Registration No.:

ELECTRICITY ORDINANCE
ELECTRICITY RULES, 1999

FORM N

(Rule 70)

**CERTIFICATE OF REGISTRATION AS
AN ELECTRICAL SERVICES CONTRACTOR**

In accordance with rule 70 of the Electricity Rules, 1999, this Certificate is issued to on behalf of
(holder) (name of business)
and authorizes the holder to carry on the business of electrical engineering services as an Electrical Services Contractor at
(address of business and branches)
up to an approximate operational voltage of:

500	275	132	33	11	*kilovolts
-----	-----	-----	----	----	------------

for a period of twelve months from the date of issue/renewal* shown below:

Date of issue/renewal*:

.....

Registration No.:

.....

Fee RM:

.....

.....

Director,
Sarawak

VALID FOR ONE YEAR. DATES OF RENEWAL OVERLEAF

* Delete whichever is not applicable.

[Am. Cap. A109]

Registration No.:

ELECTRICITY ORDINANCE

ELECTRICITY RULES, 1999

FORM O

(Rule 74)

**CERTIFICATE OF REGISTRATION
AS AN ELECTRICAL INSTALLATION CONTRACTOR**

In accordance with rule 74 of the Electricity Rules, 1999, this Certificate is
issued to
(holder)
on behalf of
(name of business)
and authorizes him to carry on the business of electrical work as an Electrical
Installation Contractor at
..... for a period
of twelve months from the date of issue or renewal shown below:

Date of issue/renewal*:

.....

Restriction (if any):

.....

Fee RM:

.....

.....

Director,
Sarawak

VALID FOR ONE YEAR. DATES OF RENEWAL OVERLEAF

* Delete whichever is not applicable.

[Am. Cap. A109]

Registration No.:

ELECTRICITY ORDINANCE

ELECTRICITY RULES, 1999

FORM P

(Rule 79)

**CERTIFICATE OF REGISTRATION
AS AN ELECTRIC SIGN CONTRACTOR**

In accordance with rule 79 of the Electricity Rules, 1999, this Certificate is
issued to
(holder)
on behalf of
(name of business)
and authorizes the holder to carry on the business of electrical work as an Electric
Sign Contractor at
.....
(address of business and branches)
for a period of twelve months.

Date of issue/renewal*:

.....

Registration No.:

.....

Fee RM:

.....

.....

Director,
Sarawak

VALID FOR ONE YEAR. DATES OF RENEWAL OVERLEAF

* Delete whichever is not applicable.

[Am. Cap. A109]

Registration No.:

ELECTRICITY ORDINANCE
ELECTRICITY RULES, 1999

FORM Q

(Rule 83)

**CERTIFICATE OF REGISTRATION
AS AN ELECTRICAL REPAIR CONTRACTOR**

In accordance with rule 83 of the Electricity Rules, 1999, this Certificate is
issued to
(holder)
on behalf of
(name of business)
and authorizes the holder to carry on the business of electrical work as an Electrical
Repair Contractor at
.....
(address of business and branches)
for a period of twelve months.

Date of issue/renewal*:

Registration No.:

Fee RM:

.....
Director,
Sarawak

VALID FOR ONE YEAR. DATES OF RENEWAL OVERLEAF

* Delete whichever is not applicable.

[Am. Cap. A109]

Registration No.:

ELECTRICITY ORDINANCE
ELECTRICITY RULES, 1999

FORM R

(Rule 87)

**CERTIFICATE OF REGISTRATION
AS A SWITCHBOARD MANUFACTURER**

In accordance with rule 87 of the Electricity Rules, 1999, this Certificate is
issued to
(holder)

Manager/Secretary/Proprietor/Partners* of
.....
(name of company or firm)

and authorizes the holder to carry on the business of manufacturing switchboards to
an approximate operational voltage of:

33	11	0.600
----	----	-------

 *kilovolts

as a switchboard manufacturer at

.....
.....
.....

(address of company, firm and branches)

for a period of twelve months from the date of issue/renewal* shown below:

Date of issue/renewal*:

.....

Registration No.:

.....

Fee RM:

.....

.....
Director,
Sarawak

VALID FOR ONE YEAR. DATES OF RENEWAL OVERLEAF

* Delete whichever is not applicable.

[Am. Cap. A109]

Certificate No.:

ELECTRICITY ORDINANCE
ELECTRICITY RULES, 1999

FORM S

(Rule 92)

CERTIFICATE OF APPROVAL

In accordance with rule 92 for the Electricity Rules, 1999, this Certificate is

issued to
(holder)

on behalf of
(name of business)

of
(address)

and approval is given to

manufacture	import	display*	sell	advertise†
-------------	--------	----------	------	------------

the equipment, the descriptions of which are set out below, direct from

and the equipment is in compliance with approved standards for a period of twelve months from the date of issue or renewal shown hereunder:

Date of issue/renewal† Expiry Date

Approval No. Fee RM

Description of Equipment

Equipment

Trade Name

Type/Model

Specification of Equipment

Voltage Volts

Power watts

Frequency Hz

Current Amp

.....
Director,
Sarawak

- * Equipment approved is intended to be displayed only and not to be sold, installed or used.
- † Delete whichever is not applicable.

[Am. Cap. A109]

ELECTRICITY ORDINANCE
ELECTRICITY RULES, 1999

FORM T

(Rule 109)

No.

ELECTRICAL INSPECTOR'S IDENTIFICATION CARD

Full Name:

Identity Card No.:

Signature of Holder:

PHOTO

1. The holder of this card whose name and photograph appears above is an officer duly appointed under section 3 of the Electricity Ordinance (*Cap. 137 (1958 Ed.)*).
2. Under section 13 of the Ordinance, he may, for the purpose of discharging any of his duties or for carrying out any of his functions under the Ordinance or any rules made thereunder, enter any land, house or building.
3. A person who finds this card shall surrender the card to the Director, Sarawak.

Date of issue:

.....
Director,
Sarawak
[Am. Cap. A109]

SECOND SCHEDULE

PART I

(Rule 6(3))

(A) LICENCE FEES

The annual fees payable on a licence granted under section 4 of the Ordinance and renewal thereof shall be as follows:

<i>Installation Capacity</i>	<i>Function of Installation</i>		
	<i>Generation</i>	<i>Transmission</i>	<i>Distribution</i>
Where the aggregate power does not exceed 5 KW	NIL	NIL	NIL
Where the aggregate power is 5 KW and above but less than 100 MW	80 sen/KW	80 sen/KW	50 sen/KW
Where the aggregate power is 100 MW and above	RM1.00/KW	RM1.00/KW	50 sen/KW

In calculation of the total fee—

- (a) KW is taken as $0.8 \times \text{kVA}$;
- (b) where a licence is given for two or more activities, the licensee is only required to pay the higher fee;
- (c) the minimum fee for any installation is RM100.00.

**(B) LICENCE FEES FOR CONSTRUCTION AND
MAINTENANCE OF INSTALLATION AND
GENERATION OF ELECTRICITY BY HYDRO-POWER**

- (a) Prior to the date of commercial operation of the installation:

<i>Installation Capacity</i>	<i>Fee Per Annum</i>
100 MW and below	RM100
Between 101 MW and 500 MW	RM1,000
Between 501 MW and 999 MW	RM50,000
1000 MW and above	RM100,000

- (b) After the date of commercial operation of the installation:

<i>Installation Capacity</i>	<i>Fee Per Annum</i>
100 MW and below	RM0.50 per KW
Between 101 MW and 500 MW	RM1.00 per KW
Between 501 MW and 999 MW	RM1.20 per KW
1000 MW and above	RM1.50 per KW

- (c) For the purpose of this item, the “date of commercial operation” shall mean the date on which the licensee commences generation of electricity for sale and delivery to the public.
- (d) The provisions of this item shall not apply where the generation of electricity by hydro-power is covered under the terms of a licence for which fees are chargeable and paid under Part I (A) of the Second Schedule.

PART II

FEES FOR REGISTRATION OF INSTALLATION AND RENEWAL

(Rule 7(2) and (3))

Fees according to the following fees shall be payable for the registration of installation or renewal of registration:

<i>Capacity of Installation</i>	<i>Fees for 12 months</i>
(a) for each installation of 10 kilowatts or less	RM20
(b) for each installation above 10 kilowatts to 50 kilowatts	RM50
(c) for each installation above 50 kilowatts to 100 kilowatts	RM500
(d) for each installation above 100 kilowatts to 300 kilowatts	RM1,000
(e) for each installation above 300 kilowatts to 600 kilowatts	RM1,500
(f) for each installation above 600 kilowatts to 1000 kilowatts	RM2,000

	<i>Capacity of Installation</i>	<i>Fees for 12 months</i>
(g)	for each installation above 1000 kilowatts to 2500 kilowatts	RM3,000
(h)	for each installation above 2500 kilowatts to 5000 kilowatts	RM5,000
(i)	for each installation above 5000 kilowatts	RM1.00 per kilowatt

PART III

(Rule 8(4))

FEES FOR INSPECTION AND TEST OF INSTALLATION

The following fees shall be charged for inspection and test of the installations:

	<i>Capacity of Installation</i>	<i>Fees per inspection and test</i>
(a)	for each installation of 50 kilowatts or lower	RM50
(b)	for each installation above 50 kilowatts to 100 kilowatts	RM100
(c)	for each installation above 100 kilowatts to 300 kilowatts	RM150
(d)	for each installation above 300 kilowatts to 600 kilowatts	RM200
(e)	for each installation above 600 kilowatts to 1000 kilowatts	RM250
(f)	for each installation above 1000 kilowatts	RM300

PART IV

(Rule 54)

**FEES FOR EXAMINATION FOR REPLACEMENT OF AND
ENDORSEMENT OF CERTIFICATES OF
COMPETENCY/CERTIFICATES OF REGISTRATION**

Fee according to the following scale shall be charged for the following examinations for the Certificates of Competency/Certificates of Registration held under these Rules, for the replacement of lost or damaged, and endorsement of Certificates of Competency/Certificates of Registration, as provided in these Rules.

	<i>Examination/Replacement/Endorsement of Certificates</i>	<i>Fees</i>
(a)	for examination for a Certificate of Competency as an Electrical Services Engineer	RM200
(b)	for examination for a Certificate of Competency as an Competent Electrical Engineer	RM200
(c)	for examination for a Certificate of Competency as an Electrical Supervisor	RM150
(d)	for examination for a Certificate of Competency as a Chargeman	RM100
(e)	for examination for a Certificate of Registration as an Electrical Installation Contractor	RM100
(f)	for examination for a Certificate of Competency as a Wireman	RM50
(g)	for examination for a Certificate of Competency as a Cable Joiner	RM50
(h)	for replacement of any Certificate of Competency as an Electrical Services Engineer	RM300
(i)	for replacement of any Certificate of Competency as a Competent Electrical Engineer	RM300
(j)	for replacement of any Certificate of Competency as an Electrical Supervisor	RM250
(k)	for replacement of any Certificate of Competency as a Chargeman	RM200
(l)	for replacement of any Certificate of Competency as a Wireman	RM100

	<i>Examination/Replacement/Endorsement of Certificates</i>	<i>Fees</i>
(m)	for replacement of any Certificate of Competency as a Cable Jointer	RM100
(n)	for replacement of any Certificate of Registration	RM100
(o)	for endorsement of any Certificate of Competency/Certificate of Registration	RM50

PART V

(Rules 52(1) and 62(2))

FEES FOR REGISTRATION OF COMPETENT PERSON

The following fees shall be payable for the initial, or renewal of, registration of competent persons of the appropriate category within the age limits as specified in the rule on:

	<i>Competent Person</i>	<i>Fees per year</i>
(a)	Electrical Services Engineer	RM300
(b)	Competent Electrical Engineer	RM200
(c)	Electrical Supervisor	RM150
(d)	Chargeman— Low Voltage	RM50
	Voltage Higher than Low Voltage	RM100
(e)	Wireman— Second Grade	RM30
	First Grade	RM30
(f)	Cable Jointer	RM30

PART VI

(Rule 64)

**COMPETENT PERSONS TO SUBMIT PLANS,
DRAWINGS AND SPECIFICATIONS**

	<i>Competent Person</i>	<i>Prepare and Submit to</i>	<i>Voltage/Ampere Limit of Installation</i>
(a)	Electrical Installation Contractor	Licensee	Low voltage and receiving energy from licensee via a switch gear rated at 60 amperes and below
(b)	Electrical Supervisor	Licensee	Low voltage and receiving energy from licensee via a switch gear rated at 100 amperes and below
(c)	Competent Electrical Engineer	Any person or authority in Sarawak	No limit
(d)	Electrical Services Engineer	Any person or authority in Sarawak	No limit

PART VII

(Rule 73)

**FEES FOR CERTIFICATE OF REGISTRATION AS AN
ELECTRICAL SERVICES CONTRACTOR**

The following fees shall be payable for the initial registration or renewal of a Certificate of Registration as an Electrical Services Contractor working at the following appropriate operational voltage:

	<i>Highest Operational Voltage in Kilovolts</i>	<i>Initial Fees for 12 months</i>	<i>Renewal Fees for 12 months</i>
(a)	5 0 0	RM3,500	RM3,000
(b)	2 7 5	RM3,500	RM3,000
	<i>Highest Operational Voltage in Kilovolts</i>	<i>Initial Fees for 12 months</i>	<i>Renewal Fees for 12 months</i>
(c)	1 3 2	RM3,000	RM2,500
(d)	3 3	RM2,000	RM1,500
(e)	1 1	RM1,500	RM1,000

PART VIII

(Rule 78)

**FEES FOR CERTIFICATE OF REGISTRATION AS AN
ELECTRICAL INSTALLATION CONTRACTOR**

The following fee shall be payable for the initial registration or renewal of a Certificate of Registration as an Electrical Installation Contractor:

*Initial Registration Fee for 12
months*

RM100

Renewal Fee for 12 months

RM50

PART IX

(Rule 82)

**FEES FOR CERTIFICATE OF REGISTRATION AS
AN ELECTRIC SIGN CONTRACTOR**

The following fee shall be payable for the initial registration or renewal of a Certificate of Registration as an Electric Sign Contractor:

*Initial Registration Fee for 12
months*

RM100

Renewal Fee for 12 months

RM50

PART X

(Rule 86)

**FEES FOR CERTIFICATE OF REGISTRATION AS
AN ELECTRICAL REPAIR CONTRACTOR**

The following fee shall be payable for the initial registration or renewal of a Certificate of Registration as an Electrical Repair Contractor:

*Initial Registration Fee for 12
months*

RM100

Renewal Fee for 12 months

RM50

PART XI

(Rule 91)

**FEES FOR CERTIFICATE OF REGISTRATION AS
A SWITCHBOARD MANUFACTURER**

The following fees shall be payable for the initial registration or renewal of a Certificate of Registration as a Switchboard Manufacturer of the appropriate class:

	<i>Classification</i>	<i>Initial Registration Fees for 12 months</i>	<i>Renewal Fees for 12 months</i>
(a)	Switchboard operated at low voltage	RM600	RM300
(b)	Switchboard operated at higher than low voltage	RM3,000	RM2,000

PART XII

(Rule 92 (4))

**FEES FOR CERTIFICATE OF APPROVAL TO MANUFACTURE,
IMPORT, DISPLAY, SELL OR ADVERTISE EQUIPMENT**

The following fees shall be payable for the initial registration or renewal of a Certificate of Approval for the manufacture, import, display, sale or advertisement of each electrical equipment of the following appropriate voltage ratings:

<i>Voltage Rating</i>				<i>Initial Fees for 12 months</i>	<i>Renewal Fees for 12 months</i>
(a)	240V			RM200	RM100
(b)	415V			RM300	RM200

THIRD SCHEDULE

(Rule 11(2))

CALCULATION OF MAXIMUM CURRENT DEMAND FOR DOMESTIC INSTALLATION

This Schedule gives the determination of the maximum current demand for an installation and includes the current demand to be assumed for commonly used equipment.

The current demand of a final circuit is determined by summing the current demands of all points of utilisation and equipment in the circuit and, where appropriate, making an allowance for diversity. Typical current demands to be used for this summation are given in Table A.

The maximum current demand of a circuit supplying a number of final circuits may be assessed by using the allowances for diversity given in Table B which are applied to the total current demand of all the equipment supplied by that circuit and not by summing the current demands of the individual final circuits obtained as outlined above. In Table B the allowances are expressed as percentages of the rated full load current of the current-using equipment.

TABLE A
**CURRENT DEMAND TO BE ASSUMED FOR POINTS OF
 UTILISATION AND CURRENT-USING EQUIPMENT**

<i>Point of utilisation or current-using equipment</i>	<i>Current demand to be assumed</i>
Sockets outlets other than 2A socket outlets	Rated current
Lighting outlet*	Current equivalent to be connected load, with a minimum of 100W per lamp-holder
Electric clock, electric shaver supply unit, shaver socket outlet, bell transformer, and current-using equipment of a rating not greater than 5 VA	May be neglected
Household cooking appliance	The first 10A of the rated current plus 30% of the remainder of the rated current plus 5A if a socket outlet is incorporated in the control unit
All other stationary equipment	Malaysian Standard rated current, or normal current

*Note: Final circuits for discharge lighting are arranged so as to be capable of carrying the total steady current, viz., that of the lamp(s) and any associated gear and also their harmonic currents. Where more exact information is not available, the demand in volt-amperes is taken as the rated lamp watts multiplied by not less than 1.8. This multiplier is based upon the assumption that the circuit is corrected to a power factor of not less than 0.85 lagging, and takes into account gear losses and harmonic currents.

TABLE B
ALLOWANCES FOR DIVERSITY

<i>Purpose of final circuit fed from conductors or switch gear to which diversity applies</i>	<i>Individual households installations, including individual dwellings of a block</i>
1. Lighting	66% of total current demand
2. Power	100% of total current demand up to 10 Amperes + 50% of any current demand in excess of 10 Amperes
3. Cooking appliances	10 Amperes + 30% f.1. of connected cooking appliances in excess of 10 Amperes + 5 Amperes if socket outlet incorporated in unit
4. Water-heaters (instantaneous type)*	100% f.1. of largest appliance + 100% f.1. of 2nd largest appliance + 25% f.1. of remaining appliances
5. Water-heaters	No diversity allowable
6. Standard arrangements of final circuit using socket outlets	100% of current demand of largest circuit + 40% of current demand of every other circuit
7. Socket outlets other than those included in 6 above and stationary equipment other than those listed above	100% of current demand of largest point of utilisation + 40% of current demand of every other point of utilisation

* For the purpose of this Table, an instantaneous water-heater is deemed to be a water-heater of any loading which heats water only while the tap is turned on and therefore uses electricity intermittently.

It is important to ensure that the distribution boards are of sufficient rating to take the total load connected to them without the application of any diversity.

Made by the Majlis Mesyuarat Kerajaan Negeri this 30th day of June, 1999.

KIT SU LEN,
Clerk to Majlis Mesyuarat Kerajaan Negeri

Saravak LawNet