2010/04

ENERGY (AMENDMENT) REGULATIONS 2010

Sir F. Goodwin, K.B.E.
Queen's Representative

ORDER IN EXECUTIVE COUNCIL

At Avarua, Rarotonga, this 5th day of **March** 2010

Present:

HIS EXCELLENCY THE QUEEN'S REPRESENTATIVE IN EXECUTIVE COUNCIL

PURSUANT to section 25 of the Energy Act 1998, His Excellency the Queen's Representative, acting by and with the advice and consent of the Executive Council, hereby makes the following regulations:

ANALYSIS

1. Title and commencement
2. Repeal of Schedule A
Schedules

REGULATIONS

1. Title and commencement – These regulations may be cited as the Energy (Amendment) Regulations 2010 and deemed part of the Energy Regulations 2006 (hereinafter referred to as "the principal regulations").

2. Repeal of Schedule A – Schedule A of the principal regulations is repealed and substituted by Schedule A1 and Schedule A2 as set out in the Schedules to these regulations.

Price $1.50

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Grover L. Harmon
Clerk of the Executive Council

These Regulations are administered by the Ministry of Works, Energy and Physical Planning (Energy Division)

BY AUTHORITY
Cook Islands Government - 2010

SCHEDULES

SCHEDULE A1

PRESCRIBED FEES - RAROTONGA

The fees payable in the Schedule shall be payable in respect of the matters specified.

Matters in respect of which fee payable	Fee ($)	Provisions of the Act or these Regulations under which fee payable
Application for Electricity Supply Licence:		
(a) Up to 100kW	123.75	Regulation 5 (1) (g)
(b) Over 100kW	191.25	Regulation 5 (1) (g)
Application for Wiring Permits:		
(a) Domestic Installation	106.90	Regulation 31 (2)
(b) Temporary Supply Installation	106.90	Regulation 31 (2)
(c) Domestic Installation		
- Two/Three Phase Supply	140.65	Regulation 31 (2)
(d) Commercial Installation (up to 5kW MD)	140.65	Regulation 31 (2)
(e) Multi-Complex Installation		
• Over 5kW and up to 10kW MD	208.15	Regulation 31 (2)
• Over 10kW MD	208.15*	Regulation 31 (2)
(*- plus $33.75 for each additional 5 kW or part thereof)		
(f) Private and Standby Generating Plant		
• Domestic	106.90	Regulation 31 (2)
• Commercial	140.65	Regulation 31 (2)
Application for Re-Inspection:		
(a) Domestic Installation	106.90	Regulation 34 (1)
(b) Domestic Installation		
- Two/Three Phase Supply	140.65	Regulation 34 (1)
(c) Commercial Installation	140.65	Regulation 34 (1)
(d) Multi-Complex Installation		
• Over 5kW and up to 10kW MD	208.15	Regulation 34 (1)
• Over 10kW MD	208.15*	Regulation 34 (1)
(*- plus $33.75 for each additional 5 kW or part thereof)		
Application for Registration:		
(a) Electrician	67.50	Section 18 (1) (a)
(b) Electrical Mechanic	67.50	Section 18 (1) (b)
(c) Electrical Service Technician	67.50	Section 18 (1) (c)
(d) Line Mechanic	67.50	Section 18 (1) (d)
Application for Practising Licence:		
(a) Electrician	95.65	Regulation 78
(b) Electrical Mechanic	67.50	Regulation 78
(c) Electrical Service Technician	67.50	Regulation 78

SCHEDULE A2

PRESCRIBED FEES – OUTER ISLANDS

The fees payable in the Schedule shall be payable in respect of the matters specified.

Matters in respect of which fee payable	Fee ($)	Provisions of the Act or these Regulations under which fee payable
Application for Electricity Supply Licence:		
(a) Up to 100kW	56.25	Regulation 5 (1) (g)
(b) Over 100kW	112.50	Regulation 5 (1) (g)
Application for Wiring Permits:		
(a) Domestic Installation	45.00	Regulation 31 (2)
(b) Temporary Supply Installation	45.00	Regulation 31 (2)
(c) Domestic Installation		
- Two/Three Phase Supply	78.75	Regulation 31 (2)
(d) Commercial Installation (up to 5kW MD)	78.75	Regulation 31 (2)
(e) Multi-Complex Installation		
• Over 5kW and up to 10kW MD	146.25	Regulation 31 (2)
• Over 10kW MD	146.25*	Regulation 31 (2)
(*- plus $33.75 for each additional 5 kW or part thereof)		
(f) Private and Standby Generating Plant		
• Domestic	45.00	Regulation 31 (2)
• Commercial	78.75	Regulation 31 (2)
Application for Re-Inspection:		
(a) Domestic Installation	45.00	Regulation 34 (1)
(b) Domestic Installation		
- Two/Three Phase Supply	78.75	Regulation 34 (1)
(c) Commercial Installation	78.75	Regulation 34 (1)
(d) Multi-Complex Installation		
• Over 5kW and up to 10kW MD	146.25	Regulation 34 (1)
• Over 10kW MD	146.25*	Regulation 34 (1)
(*- plus $33.75 for each additional 5 kW or part thereof)		
Application for Registration:		
(a) Electrician	67.50	Section 18 (1) (a)
(b) Electrical Mechanic	67.50	Section 18 (1) (b)
(c) Electrical Service Technician	67.50	Section 18 (1) (c)
(d) Line Mechanic	67.50	Section 18 (1) (d)
Application for Practising Licence:		
(a) Electrician	95.65	Regulation 78
(b) Electrical Mechanic	67.50	Regulation 78
(c) Electrical Service Technician	67.50	Regulation 78

COOK ISLANDS

ENERGY REGULATIONS 2006

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ENERGY REGULATIONS 2006

Queen's Representative

ORDER IN EXECUTIVE COUNCIL

At Avarua, Rarotonga, this 15th day of May 2006

Present:

HIS EXCELLENCY THE QUEEN'S REPRESENTATIVE IN EXECUTIVE COUNCIL

PURSUANT to Section 25 of the Energy Act 1998 the Queen's Representative, acting by and with the advice and consent of the Executive Council, makes the following regulations.

REGULATIONS

l. Title and Commencement - (1) These Regulations may be cited as the Energy Regulations 2006.

(2) These Regulations shall come into force on a date to be appointed by the Minister and notified in the Cook Islands Gazette.

PART I
GENERAL

2. Interpretation - In these Regulations, unless the context otherwise requires;

"A.C." means alternating current;

"Act" means the Energy Act 1998;

"Appliance" means any device that utilises electricity for a particular purpose;

"Authority" means any Electricity Supply Authority, local authority, company or body licensed under the Act to supply electricity in any specified area and includes Te Aponga Uira O Tumu-Te-Varovaro and Outer Islands Energy;

"Bare" means not covered with insulating material;

"Bonding" means the permanent connection of any electrically conductive fitting or other

equipment to another electrically conductive fitting or other equipment such that they both operate at the same electrical potential;

"Boundary" means a continuous line enclosing the extent of an area within which the consumer has ownership or a right of occupation;

"Cable" means a length of insulated single conductor (solid or stranded) or of two or more conductors, each provided with its own insulation;

"Competent person" means a registered person whose registration allows that person to do that work.

"Conductor" means any wire, cable, bar, or tube, used or placed in position for conveyance of electricity, but does not include the wire of any electric fence;

"Consumer Mains" means those conductors between the point of supply and the main switchboard;

"D.C." means direct current;

"Distribution line" means an electric supply line of any voltage or voltages acquired, laid, erected, and maintained by an Authority, which is not a distribution main or service main;

"Distribution main" means that portion of an electric supply line of any voltage or voltages on private property which is jointly used by consumers all of whom have legal right for its use for purposes of receiving a supply of electricity and which connects a distribution line to a service main or to a point of supply;

"Earthed" means effectively connected to the general mass of earth;

"Earth electrode" means a metal rod or rods, or other conducting objects, providing an effectual connection to the general mass of earth;

"Electric supply line" means a wire, conductor, or other means used for conveying, transmitting, or distribution of energy, whether by overhead line or ground cable, together with any casing, covering, coating, tube, pipe or insulator enclosing, surrounding or supporting the same or any part thereof, or any apparatus connected therewith for the purpose of conveying, transmitting, or distributing such energy and includes any support, cross-arm, stay, strut, or safety device erected or set up for that purpose;

"Electrical hazard" means danger from electricity to life and property or both;

"Electrical Installation" means all fittings, equipments, materials–

(a) that form part of a system for conveying electricity; and

(b) that form part of such a system at any point, from the point of supply, to a consumer, to any point from which electricity conveyed through that system may be consumed; and

(c) includes any fittings, equipments, materials that are used, or designed or intended for use, by any person, in or in connection with the generation of electricity for that person's use and not for supply to any other person.

"Electrical Work" means any electrical work that falls into any of the following categories–

(a) the construction or maintenance of electrical installations or works;

(b) the construction and maintenance of any fixed appliance or semi-portable appliance;

(c) the connection or disconnection of electrical wiring of works, electrical installations or electrical appliances to or from a power supply, other than by means of a plug, or appliance inlet, or a pin that is inserted into a socket outlet.

"Extra-low voltage" or "ELV" means any voltage normally not exceeding 50 volts A.C. or 120 volts D.C.;

"Fixed appliance" means an electrical appliance which is fastened to a support and is connected to the wiring of an electrical installation other than by means of a plug and socket;

"Gazette" means the Gazette of the Cook Islands;

"Generating station" means a place where equipment is installed for the generation and supply of electricity;

"High voltage" or "HV" means any voltage exceeding 1000 volts A.C. or 1500 volts D.C.;

"Isolated" in relation to any electric supply line or conductor means that the electric supply line or conductor is deliberately disconnected from any source of electricity;

"Live" in relation to a conductor of electricity, means charged with electricity so that a difference in electrical potential exists between the conductor and earth;

"Low voltage" or "LV" means any voltage normally exceeding 50 volts A.C. or 120 volts D.C. but not exceeding 1000 volts A.C. or 1500 volts D.C.;

"Main Switchboard" means that switchboard on a consumer's premises which provides the greatest degree of control of the supply of electricity to that installation, but does not

include any panel that is used exclusively for the mounting of a meter or control device, which is part of the supply system, or the master switch;

"Master switch" means that first switch after the distribution line for the purpose of the isolation of a distribution main or mains, or for the isolation of more than one service main;

"Multiple earthed neutral system" or "MEN system" means a system of supply of electricity in which the neutral is connected to earth;

(a) at the source of supply; and

(b) at points on the supply system; and

(c) at every electrical installation connected to the system;

"Point of supply" means the point at which the Authority's service protection is located;

"Portable appliance" means an appliance that from the nature of its use requires to be moved while it is working or is so designed that it can readily be moved while it is working and is connected to the fixed wiring by means of a plug or similar device;

"Premises" means the area within the boundary of any land, building, or installation where there is only one consumer receiving, or is capable of receiving a supply of electricity;

"Regulation" means Regulations made under the Act;

"Residual current device" or "RCD" means fittings;

(a) that incorporate a magnetic core through which all active and neutral conductors of a circuit pass; and

(b) that are capable of sensing a current imbalance (residual current) as a result of earth leakage from a circuit; and

(c) that are designed to disconnect the supply of electricity when the current imbalance (residual current) exceeds a predetermined level;

"Road" includes a street or other roadway used by the general public for vehicle traffic;

"Semi-portable appliance" means an appliance, not being a portable appliance, that from the nature of its use is required to be moved or is capable of being moved to a new position from time to time while it is working, or between the periods when it is working;

"Service fuse" means a fuse installed by the Authority for interrupting the supply to an

installation on a consumer's premises from the Authority's lines;

"Service mains" means that portion of an electric supply line of any voltage or voltages on a consumer's premises between the distribution line or distribution line and the consumer's main switchboard for the sole use of that consumer;

"Source of supply" means either the generating station or substation from which electricity at the voltage at which it is delivered to the consumer is derived;

"Standard frequency" means the rated frequency of alternating current system, and this frequency shall be 50 hertz;

"Standard voltage" means in the case of a low-voltage single phase supply, a voltage of 240 volts between phase and neutral and, in case of a 3-phase supply, 415 volts between phases, or in the case of any high voltage supply, the voltage at which the Authority has contracted to give supply;

"Substation" means any building, structure, or enclosure, either above or below ground, confined to a given area, incorporating electrical equipment which may include electrical switchgear, control gear, transformers, or protection devices but excludes those installations which contain only isolation equipment of fuses or relays and where such electrical equipment is not contained in a building, structure or enclosure, the electrical equipment itself is the substation;

"Supply system" means all electric lines, substations, and equipment which are operated by the Authority, but does not include any service main or distribution main;

"Telecom" means Telecom Cook Islands Limited;

"Works" means any fittings, equipments, materials that are used, or designed or intended for use, in or in connection with the generation, conversion, transformation, or conveyance of electricity to the public.

3**.** Application - (1) These Regulations shall apply to all electrical work, electric supply lines or works used for generating, transforming, converting or conveying electricity.

(2) Every addition to, or alteration of, an existing electric supply line, shall be deemed to be new work and all the provisions of these Regulations shall apply to all work done in connection with any such addition or alteration.

(3) These Regulations shall bind the Crown.`

4**.** Modification of Requirements - (1) In any case where the Minister, upon application made to him in writing by any person, Authority or Licensee, who intends to erect or construct or alter any electric supply line or works or who is under any obligation imposed by these Regulations to do any act, perform any service or make any inspection, is satisfied that strict compliance with

the requirements of these Regulations would involve expenditure out of proportion to the degree of freedom from electrical hazard to be secured by any such compliance, he may modify, relax or grant exemption from any such requirement, if satisfied that reasonable freedom from electrical hazard is likely to continue to exist or can otherwise be secured.

(2) In granting any such modification, relaxation or exemption, the Minister shall specify what special work (if any) he requires to be done to render any electricity supply line or work reasonably free from electrical hazard and may impose any other reasonable conditions or qualifications he may think fit.

(3) Any such modification, relaxation, or exemption may be general or special, and may be rescinded by the Minister at any time.

(4) The Minister may permit the use of methods or types of construction or materials not especially provided for in these Regulations and may impose such conditions as he deems necessary with respect to the use thereof.

PART II
LICENCES TO SUPPLY ELECTRICITY

5. Application for Licence - (1) Every application for the grant of a licence under Section 6 of the Act shall be addressed to the Minister and shall include the following particulars -

(a) a Title of the undertaking to whom a grant of licence is proposed together with its address and relationship of the applicant with the proposed undertaking;

(b) if the applicant is a Company, a copy of its Memorandum and Articles of Association and the names and addresses of all its Director or Partners;

(c) three copies, each signed by the applicant, of maps of the proposed area of supply which shall be on a scale of not less than 10cm to one kilometre or on such other scale as the Minister may specify;

(d) a list of local authorities invested with the administration of any portion of the area of supply;

(e) an approximate statement describing any lands which the applicant proposes to acquire or lease for the purpose of the licence;

(f) an approximate statement of the capital proposed to be expended for setting up the facilities;

(g) the prescribed application fee as set out in Schedule A.

(2) Before considering any application, the Minister may require the applicant to furnish any further information which the Minister may deem relevant to the decision as to whether or not a

licence should be granted and if so, the terms and conditions of the licence.

(3) The rating in kilowatts or Megawatts of any installation shall be deemed to be the capacity of the generating or the main transforming plant.

6. Advertisement of Application and Public Inspection - (1) The applicant shall, within fourteen days from the submission of the application under Regulation 5, publish notice of his application by public advertisement in the daily newspaper of the Cook Islands in two successive issues and shall give the address of his office at which details of the application can be inspected.

(2) The applicant shall deposit at his office in three copies for public inspection;

(a) a brief description of the undertaking proposed to be established by him, and

(b) a map referred to in Regulation 5 (1)(c).

The above shall remain available for public inspection for twenty working days after the date of advertisement in the daily newspaper.

7. Local Enquiries - If any person who is locally interested objects to the grant of a licence applied for under the Act, the Minister may cause a local enquiry to be held of which notice in writing shall be given to the applicant and to the objector. Provided that the Minister may refuse such an enquiry if in his opinion, the objection is frivolous or vexatious.

8. Grant of A Licence - (1) When the Minister has approved grant of a licence, a copy of the licence shall be published in the official gazette.

(2) The date of notification in the gazette shall be deemed to be the date of commencement of the licence.

9. Monopoly - Nothing in the licence granted under Regulation 8 shall be deemed to give the Licensee a monopoly or the exclusive right to supply electricity within the area of supply specified in the licence.

10. Application by an Authority for Amendment in its Area of Supply - An application by an Authority for amendment, increase or decrease in the area of supply as specified in the licence granted to it under Regulation 8, shall be treated as a fresh application for licence and shall be dealt with in accordance with Regulations 5, 6, 7, 8 and 9.

11. Application for Standby Generating Plant and Private Generating Plant - (1) Every person who install or intend to install a standby generating plant or a private generating plant, must submit an application to the Electrical Inspectorate to operate the system.

(2) The system shall be tested before it is put into service and shall comply with the requirements of these Regulations.

12. Compensation - (1) Nothing in these Regulations shall be deemed in anyway–

(a) to interfere with, affect, or abridge any rights or powers vested in the Government of the Cook Islands or the Minister or any other person, under any Act of Parliament authorising the construction, management, or working of any public works; or

(b) to render the Government of the Cook Islands or the Minister or any other person liable to pay an Authority or Licensee any compensation for injury to works, for any loss occasioned thereby. Provided that this provision is without prejudice to any liability arising otherwise than under these Regulations.

(2) Neither the granting of the licence nor anything contained in the licence either expressly or by implication shall impose on the Government of the Cook Islands any liability to pay compensation or damages to any person or local authority by reason of the exercise by the Authority or the Licensee of the powers conferred by the licence.

(3) Neither the granting of the licence nor anything contained in the licence either expressly or by implication shall affect or prejudice any liability imposed by law on the Authority or the Licensee to pay any compensation or damages to any person arising by reason of the exercise by the Authority or the Licensee of the powers conferred by the licence.

PART III
INSPECTORS

13. Appointment of Chief Electrical Inspector - The Secretary may, by notification in the Gazette, appoint the Chief Electrical Inspector to perform the functions defined in the Act and these Regulations.

14. Qualifications of Chief Electrical Inspector - No person shall be appointed to Chief Electrical Inspector unless the Secretary is satisfied that-

(a) he possesses a Certificate in Electrical Engineering from a recognised institution; and

(b) he has been regularly engaged for a period of at least ten years in the practice of electrical engineering of which at least five years have been spent in electrical wiring work for households, commercial establishments and industries with an Electrical Contractor, Government Department, Corporation or Authority; and

(c) he has been regularly engaged for a period of at least three years as an Electrical Inspector with a recognised Authority.

15. Appointment of Inspectors - The Secretary may, by notification in the Gazette, appoint an Inspector to perform the functions defined in the Act and these Regulations.

16. Qualifications of Inspectors - No person shall be appointed an Inspector unless the Secretary is satisfied that-

(a) he possesses a Electrical Trade Certificate from a recognised institution; and

(b) he has been regularly engaged for a period of at least five years in the practice of electrical engineering of which at least three years have been spent in electrical wiring work for households, commercial establishments and industries with an Electrical Contractor, Government Department, Corporation or Authority.

17. Appointment of Officers to Assist Inspectors - The Secretary may, by notification in the Gazette, appoint as many Officers as are considered necessary by him to assist an Inspector.

18. Qualifications of Officers to Assist Inspectors - No person shall be appointed as an Officer to assist an Inspector unless the Secretary is satisfied that:

(a) he possesses a Electrical Trades Certificate from a recognised institution; and

(b) he has been regularly engaged for a period of at least three years in electrical wiring work for households, commercial establishments and industries with an Electrical Contractor, Government Department, Corporation or Authority.

19. Entry and Inspection - Any Inspector or any Officer appointed to assist the Inspector shall have the right of entry, inspection and examination and to issue necessary orders and notices in accordance with the Act.

20. Submission of Records - An Inspector or any Officer appointed to assist the Inspector may require a supplier or an owner to submit to him for examination, any record of tests made in connection with his works. Similarly, a supplier or an owner may require the Inspector or any Officer appointed to assist the Inspector to submit to him for examination, any record of tests made by the Inspector or any Officer appointed to assist the Inspector. Both parties shall comply with such requisitions.

PART IV
SUPPLY TO CONSUMERS

21. Systems - (1) The Authority shall supply electricity to the consumers by means of one or more of the following systems as may be prescribed by the licence-

(a) three-phase 4-wire alternating current system at a normal rated voltage of 415 volts between phases and 240 volts between each phase and the neutral conductor;

(b) three phase 3-wire alternating current system at a normal rated voltage of 415 volts between phases;

(c) two wire single phase alternating current system at a normal rated voltage of 240 volts;

(d) high voltage alternating current 3 phase system;

(e) such other system as may be authorised by the licence.

(2) The system of supply of low voltage alternating current installations shall be the MEN system.

22. Frequency - The frequency at the consumer's point of supply shall be maintained, except for momentary fluctuations within 2 percent (2%) above or below 50 hertz.

23. Voltage - (1) The voltage at the consumer's point of supply shall be designed, except for momentary fluctuations within 6 percent (6%) above or below the standard voltage, under normal load conditions.

(2) In case of a complaint by a consumer regarding voltage at his installation being beyond prescribed limits, the Authority shall arrange to record the voltage for a reasonable period. If the variations are beyond the prescribed limits under normal load conditions, the Authority shall take steps to improve the voltage conditions to bring them within these limits.

(3) The Authority may require a consumer to make a deposit for the charges to be incurred in the check of voltage which will be refunded to the consumer in case the voltage is found to be beyond the prescribed limits.

24. Supply to Consumers - (l) A consumer requiring supply of electricity to his premises may request the Authority in writing giving such details as the Authority may require including the location and extent of his premises.

(2) The Authority shall supply electricity to the consumer according to its standard terms and conditions for the supply of electricity. Special conditions shall apply to cases of uneconomic supply as laid down in Regulation 27.

(3) The Authority shall construct its system for providing electricity to the consumer, consistent with its current practice, in a manner that will result in minimum total cost to the consumer. If more than one consumer is to be supplied electricity through the same system, the system will be constructed in a manner so as to balance, as far as possible, the total cost to each consumer.

(4) The consumer shall bear the cost of the installation of all service mains within his premises.

(5) The Authority shall share or apportion equitably among the consumers the cost of a distribution main erected by it.

(6) The Authority may set any requirements in terms of these Regulations for the installation and utilisation of distribution mains and service mains to ensure the safe and adequate supply of electricity to the consumer.

(7) Before giving supply to any premises, the Authority shall satisfy itself that the Electrical

Inspector has checked all electricity supply lines, plant and equipment on a consumer's premises up to the point of supply and that they are in a safe condition and in all respects fit to receive a supply of electricity.

(8) The Authority shall, when it is aware that a service main or part thereof is unsatisfactory, inadequate or unreliable, advise the consumer who shall engage a competent person to carry out any work required to remedy the defect and the consumer shall bear the cost.

(9) The Authority shall, when it is aware that a distribution main or part thereof is unsatisfactory, inadequate or unreliable, advise the consumers supplied by means of that line who shall engage a competent person to carry out any work required to remedy the defect. Provided that where the work is not completed to the satisfaction of the Authority, it shall undertake the remedial work and shall be entitled to equitably apportion cost among the affected consumers.

(10) A consumer shall provide and maintain in an acceptable condition, without cost to the Authority, sufficient suitable space on the consumer's premises to enable the Authority to install any substation, lines, or equipment necessary solely to give the consumer a satisfactory supply. In the event that this space, or an extension of space is required for a substation, lines or equipment which will also supply other consumers or premises, the provision of such space shall be on terms to be agreed between the Authority and the consumer. Provided that nothing in this Subclause shall prevent the Authority from taking land or acquiring any easement, lease or licence under the law.

(11) Where a consumer demands a supply with enhanced electrical characteristics or enhanced reliability and the Authority provides an enhancement of electrical characteristics of the whole or part of the supply system substantially beyond that which would be provided in accordance with current practice of the Authority for a consumer in similar circumstances without such requirement, the Authority may recover from the consumer additional costs incurred in providing lines or equipment to satisfy these requirements.

25. Right of Supply - (1) Every consumer within any part of the Authority's area of supply shall be entitled to a supply of electricity on the same terms and conditions as those on which any other consumer within that part of the area is receiving in similar circumstances a corresponding supply. Provided that where the electricity distribution economics are significantly different for the area in which the consumer is located, the Minister may authorise the Authority to specify such different terms and conditions for consumers within the affected area as he thinks fit.

(2) The Authority shall prepare standard terms and conditions, including a tariff schedule, under which a supply of electricity will be made available to the consumer and a copy shall be made available to any consumer on request.

(3) The terms and conditions and any amendment thereto and tariff schedule shall be deposited with the Minister when issued.

26**.** Under-utilised Capital Assets - Where an Authority has provided a capital investment in electricity distribution assets and the consumer's electricity consumption has failed consistently

to achieve the forecast level of consumption for which the consumer had requested supply and a lesser level of investment would have been satisfactory for the installation, the Authority may require the consumer to contribute towards the cost of the investment in the under-utilised capital assets.

27**.** Standard Conditions Relating to Uneconomic Supply - (1) In this Regulation, unless the context otherwise requires -

(a) the terms "extension" means any addition or alteration to the supply system of the Authority necessary to give satisfactory supply to the consumer;

(b) the capital cost of an extension shall be total construction cost of the extension;

(c) the allocated capital cost of an extension shall be the capital cost of the extension less;

(i) the portion of that capital cost allocated for the supply to other consumers in the case of a line which is or may be jointly used to supply other consumers; and

(ii) the portion of that capital cost allocated for progressive supply system development.

(d) the serviced capital cost in relation to an extension shall be the maximum capital cost for which the estimated annual revenue from the consumer will allow an adequate return to the Authority calculated in accordance with the following formula:

C x P x F

Where:

C is the average annual electricity consumption in the same general class of consumers as the consumer to be supplied;

P is the revenue per kilowatt-hour accruing to the Authority from electricity supplied to a consumer in the same general class of consumers as the consumer to be supplied;

F is a factor with defined numerical values to be applied to differing extension and consumption situations as determined by the Minister and published from time to time taking into account an appropriate economic rate of return on electricity distribution assets.

(e) the chargeable capital cost of any extension shall be the allocated capital cost of the extension less the serviced capital cost in relation to the extension; and

(f) the term "uneconomic supply", in relation to the extension means a supply where the serviced capital cost of the extension is less than the allocated capital cost.

(2) A consumer to be entitled to supply under this Regulation shall enter into an agreement for uneconomic supply with the Authority and shall pay the chargeable capital cost either as a lump sum or on a deferred payment basis approved by the Authority and extending over a period of five years, or such shorter period as agreed by the parties, together with interest at a published rate declared by the Minister.

(3) After acceptance of the electricity agreement for uneconomic supply, the Authority shall undertake to commence construction as soon as reasonably practicable.

(4) The Authority shall retain a record for a period not less than five years of the amount of the lump sum paid by the consumer and details of the deferred payment agreement, if any, together with a complete description of the extension, including a schedule of electrical capital assets.

(5) When an extension, for which an electricity agreement for the uneconomic supply is in force, is used by the Authority to supply electricity to any consumer other than the existing consumer or consumers, the Authority shall undertake a re-apportionment on a present value basis of the costing of the extension on behalf of every consumer taking supply from that extension and a copy of the re-apportionment shall be delivered to all consumers concerned. Any such additional consumer or consumers or interested party shall be required to pay their proportion of the cost of the extension to the Authority who shall reimburse the original consumer or consumers in title.

28**.** Alteration of Charges - (1) An Authority's charges for supplying electricity may be altered by giving at least one month's notice of its intention to alter such charges.

(2) Any such notice detailing the new tariff rates and the date from which they apply may be given either by advertising in the newspaper circulating in the area or by writing to the consumers concerned.

(3) After the date of a change of any charges, the Authority shall apportion the charge pro-rata on a time basis during the first meter reading cycle.

29**.** Meters and Control Equipment - (1) Meters installed by the Authority for measuring the electricity supplied to any consumer and control equipment required by the tariff shall be supplied and maintained at the expense of the Authority and shall remain the property of the Authority and form part of its supply system.

(2) The position of meters and any other equipment of the Authority on the consumer's premises shall be approved by the Electrical Inspector in consultation with the Authority, and the consumer shall provide adequate space for mounting of the meters and control equipment required by the tariff.

(3) Any meter to be used for the purpose of ascertaining the amount to be paid by the consumer for electricity supplied shall not be installed unless it records within 2.5 percent above or below the true value over the range of load for which it will be used.

(4) If any consumer considers that the meter installed in accordance with Subclause (3) of this Regulation is recording in excess of the amount of electricity use, the Authority shall, on receipt of notice to that effect, accompanied by a deposit from the consumer of an amount set by the Authority in its standard terms and conditions, cause the meter to be tested and a certificate issued showing the result of the test.

(5) In the event of the meter recording in excess of the amount of electricity used to the extent of more than 2.5 percent over the range of load on which it has been used, it shall be replaced by another meter which is accurate within those limits, and the deposit shall be returned to the consumer. The Authority may also reimburse the consumer with an amount equal to, or part of, the excess amount the consumer has paid during the time the meter was known to record in excess of the amount of electricity used.

(6) In the event of the meter recording below the amount of electricity used to the extent of more than 2.5 percent below the range of load on which it has been used, it shall be replaced by another meter which is accurate within those limits. The Authority may recover an amount equal to, or part of, the amount the consumer would normally have used for the period the meter has been known to be recording below the amount of electricity used.

30**.** Wiring Rules - (1) The installations of every consumer shall comply with the requirements of the Energy Regulations 2006, and the Australian/New Zealand Standard (AS/NZS 3000:2000) Wiring Rules.

(2) The Chief Electrical Inspector may issue, amend or revoke from time to time Wiring Rules for different classes of consumers.

31**.** Permission to Install Electrical Wiring, Appliances or Generating Plant - (1) Every person commits an offence and shall be liable on summary conviction who installs or commences to install any service main or distribution main, electrical wiring, fixed appliances, permanently connected semi-portable appliance, standby generating plant or private generating plant before he has obtained permission from the Electrical Inspectorate to carry out the work.

(2) An Electrical Wiring Permit shall be required by the electrician who is carrying out the work or in charge of the work. Every permit application must be accompanied by a fee as set out in Schedule A. This fee shall be reviewed annually.

(3) Work carried out by the Authority on meter installations, service main and distribution main shall be exempted from the requirements of Subclause (2) of this Regulation.

32**.** Conditions of Issue of Wiring Permit - (1) Every Wiring Permit issued in accordance with Regulation 31 of these Regulations shall be deemed to authorise the installation of the electrical wiring, appliances or generating plant only on the condition that:

(a) the work is commenced within 1 month from the date of issue, and

(b) If the work is not commenced within the period, the permit shall be void and of no

effect.

(c) the work is completed within the period stated on the permit, and if the work is not completed within the period, the Electrical Inspector may by notice in writing to the person to whom the permit was issued, renew the permit or cancel the same.

(d) during the currency of the permit no further permit shall be issued for the same work.

(e) the person undertaking to carry out the work, shall, on completion of such work, carry out the tests in accordance with the Energy Regulations 2006 and AS/NZS 3000:2000 Wiring Rules, and other safety testing procedures approved by the Chief Electrical Inspector, and notify the Electrical Inspectorate by completing the necessary forms.

(f) when instructed in writing by the electrician in whose name the permit was issued to cancel the permit the Electrical Inspector shall cancel the same.

33**.** Inspection and Testing of New Installations Additions and Alterations - (1) The electrician in charge of the work shall inspect and test every new installation including semi-portable appliances and every addition and alteration to an existing installation in accordance with the Energy Regulations 2006 and AS/NZS 3000:2000 Wiring Rules, and other safety testing procedures approved by the Chief Electrical Inspector. He shall be liable to a summary conviction if he fails to carry out or ensure to carrying out of any such inspection or test.

(2) The inspections and tests carried out by the Electrical Inspector are supplementary to those carried out by or under the direction of the electrician in charge of the work.

34**.** Reinspection of Consumer's Installations - (1) The Electrical Inspector shall reinspect a consumer's installation, including any portable or semi-portable appliances, and the service main and distribution main where:

(a) a consumer or an electrician requests such a reinspection; the Electrical Inspectorate may charge the consumer or the electrician a fee as set out in Schedule A. This fee shall be reviewed annually; or

(b) the Electrical Inspectorate or Authority considers a reinspection to be advisable on the grounds of the electrical circumstances of the installation; or

(c) the Chief Electrical Inspector has included the installation in the schedule of "Installations requiring frequent inspections". Such reinspections shall be undertaken at intervals specified in that schedule.

(2) Any reinspection shall follow the procedures as set out by the Electrical Inspectorate.

35**.** Temporary Installation (Including Builders Supply) - (1) Every temporary installation shall be protected against excess current and shall be effectively controlled by a conveniently situated switch or other means whereby all live conductors of the supply can be disconnected.

(2) All cables in a temporary installation shall be sheathed with tough rubber or tough plastic, or steel armoured or neutral screened. The installation shall be maintained in good condition.

(3) Flexible cords in a temporary installation shall comply with relevant Regulations and shall be used only where essential. Where exposed to risk of mechanical damage they shall be tough rubber or tough plastic sheathed.

(4) Where the supply is given to a builder's shed, the switchboard must be readily accessible. Where the supply is given to an outdoor switchboard, the switchboard shall be weatherproof and shall have all the cable entries at the bottom.

(5) All plug sockets and outdoor lighting shall be protected by RCDs, or other safety devices approved by the Chief Electrical Inspector.

(6) Every temporary installation shall be in the charge of the consumer who shall accept full responsibility to maintain the installation and every appliance connected therewith free of electrical hazard.

(7) A temporary installation shall be tested before it is put into service and shall comply with the requirements of Regulations 31, 32 and 33 of these Regulations.

(8) The duration of a temporary installation shall be 6 months. At the end of his time if the supply is still required, it may be renewed for another 6 months provided the installation is still in a satisfactory condition.

36**.** Defects to be Remedied - (1) If, as the result of any inspection or test made under Regulation 33 of these Regulations, any defect is found in any installation, or in any alteration or addition to any existing installation, the Electrical Inspector shall immediately notify the electrician who made the new installation or alteration or addition to the existing installation in writing, of the defect or defects and shall require that electrician to have it remedied within a reasonable time to be stated in the notice.

(2) If, as the result of any reinspection made under Regulation 34 of these Regulations, a defect is found in any equipment or appliance permanently connected to the fixed wiring, the Electrical Inspector shall immediately notify the consumer in writing of the defect, and shall require the consumer to have it remedied within a reasonable time to be stated in the notice.

(3) If the electrician or the consumer fails to comply with a notice issued under Subclause (1) or Subclause (2) of this Regulation, the Electrical Inspector shall instruct the Authority to disconnect the supply to the installation forthwith.

(4) The Authority shall not resume supply to the installation until the defects pointed out in the notice given under Subclause (1) or Subclause (2) of this Regulation have been remedied to the satisfaction of the Electrical Inspector.

(5) Where, in the opinion of the Electrical Inspector, any such defect creates an electrical hazard, the Electrical Inspector shall forthwith disconnect the supply to the portion of fixed wiring or the permanently connected equipment or appliance, as the case may be.

(6) If, as the result of any inspection, reinspection, or test, any defect is found in any appliance connected, or intended to be connected, or reasonably capable of being connected to the fixed wiring the Electrical Inspector shall affix to the appliance a clearly legible notice warning against its use until the defects have been remedied.

37. Power to Refuse Supply - (1) The Electrical Inspector shall have power to refuse supply of electricity to any new installation which does not, at the time of inspection before the commencement of the supply comply with the requirements of these Regulations.

(2) An Electrical Inspector which refuses permission to connect a consumer's installation to the Authority's electric supply lines shall, on request, serve upon the consumer notice in writing stating the reasons for so refusing.

(4) The Authority commits an offence if it connects a consumer to its supply system prior to the installation being approved by the Electrical Inspector.

38. Disconnection and Reconnection - (1) The Authority shall, on request by any consumer, disconnect the supply to the consumer's premises or render the electricity supply line reasonably safe where any work has to be carried out in close proximity to any such line. The Authority may charge a fee for such disconnection.

(2) Where the supply has been disconnected at the request of the consumer or by reason of default, the Authority may, before reconnecting the supply, charge a reconnection fee.

(3) Where the supply has been disconnected for a period of six (6) months or more, a reinspection of that installation shall be carried out by the Electrical Inspector before the supply is reconnected.

39. Failure to Pay for Electricity - If any consumer fails to pay any amount due for payment for electricity supplied and charges made in accordance with the Authority's tariff schedule the Authority shall serve written notice on the consumer that, without prejudice to any other remedy in that behalf, the Authority may, after the expiry of a stated reasonable period of time, disconnect the supply of electricity from the premises of that consumer.

40. Review of Requirements - (1) Any dispute between an Authority and a person or body as a result of any requirement imposed under the authority of these Regulations or arising from terms and conditions for supply of electricity under these Regulations may, on application by such person, body or the Authority, be determined by the Minister. Provided that this Subclause shall not apply to any dispute arising out of the amount of any tariff or the amount of any charge set in the Authority's tariff schedule.

(2) Where any party to any proceedings before the Minister is dissatisfied with any decision of

the Minister as being erroneous in point of law, either party may appeal to the High Court on that question of law.

(3) This Regulation shall not compel the Minister to decide any dispute as aforesaid or exclude any Court from deciding any such action.

41. Theft of Energy - Energy is declared to be a thing capable of being stolen. Any person, who fraudulently abstracts, causes to be wasted, diverts, consumes, or uses energy in a fraudulent manner, shall be guilty of theft.

PART V
GENERATING STATION, SUBSTATION AND SWITCHGEAR

42. Strength - All generating stations, substations, and associated plant shall be designed, constructed, and secured to minimise the risk of damage and to facilitate the quick restoration of supply following violent winds, cyclones or other natural disasters.

43. Security and Protection - (1) All generating stations and substations shall be so secured against entry by person other than those permitted to enter and all electrical equipment and conductors being part of such stations shall be so located, protected, or screened so as to prevent electric shock by accidental contact.

(2) All high voltage switchgear shall be provided with suitable means by which it can be safely be isolated from all live conductors.

(3) Every circuit breaker and fuse shall be capable of breaking the maximum prospective short circuit current at the point of installation and every switch intended to be used for breaking under load shall be capable of breaking the load at the point of installation.

(4) Every transformer or group of transformers, other than step-up transformers directly connected to a generator, shall be electrically protected on the primary side either individually or as a group of transformers.

44. Reclosing of Circuit-Breakers - (1) Where an automatic reclosing circuit breaker is used for the control of distribution lines, it shall be set for not more than four consecutive openings during a total period not exceeding 60 seconds and shall not be capable of any further automatic reclosing until reset by hand:

Provided that-

> (a) if the circuit-breaker fails to remain closed after the full sequence of automatic operation or part thereof, it may be closed once by hand after the expiry of not less than 5 minutes from its last automatic operation; and
>
> (b) if the circuit-breaker, after it has been closed by hand in accordance with Paragraph (a) of this Subclause, fails to remain closed, it shall not again be reclosed until the faulty

line has been sectionalised or patrolled or a combination of both has been carried out; and

The resetting of the mechanism to provide for further automatic reclosing shall not be done until the fault has been cleared.

(2) A circuit-breaker controlling distribution lines not arranged for automatic reclosing as provided in Subclause (1) of this Regulation may, upon automatic tripping, be reclosed by hand:

Provided that-

(a) any such reclosing is completed within 60 seconds of tripping; and

(b) if it is not possible to reclose the circuit-breaker in accordance with Paragraph (a) of this Subclause, or if after such reclosure the circuit-breaker fails to remain closed, it may be closed again only after the expiry of not less than 5 minutes; and

(c) if the circuit-breaker, after it has been reclosed in accordance with paragraph (b) of this Subclause, fails to remain closed, it shall not again be reclosed until the faulty line has been sectionalised or patrolled or a combination of both has been carried out.

(3) A circuit-breaker equipped with high speed automatic reclosing equipment which is set to complete its cycle of automatic trippings and reclosures within 5 seconds, and which fails to remain closed after completing that cycle, may be reclosed by hand subject to Paragraphs (a), (b) and (c) of Subclause (2) of this Regulation.

(4) Notwithstanding anything in Subclause (2) of this Regulation, a circuit breaker connected to lines that are already live may be immediately reclosed.

45. Fire Extinguishers - (1) All generating stations and occupied substation buildings shall contain the required number of suitable fire extinguishers filled with non-conducting extinguishing agent, such extinguishers being kept in a convenient place, ready for immediate use, and being conspicuously marked.

(2) The Authority shall, every year check each fire extinguisher installed under Subclause (1) of this Regulation to determine the effectiveness of such extinguisher.

PART VI
MAINTENANCE OF LINES AND WORKS

46. Maintenance of Authority's Supply Lines - (1) Any Authority may enter from time to time on any land for the purpose of maintaining any works and may remain on such land for such time as is reasonably necessary to carry out such maintenance.

(2) The Authority shall maintain all electric supply lines, substations and works forming part of its supply system in good order and condition and shall take all reasonable precautions to secure at all times continuity of service and immunity from danger. Provided that no responsibility shall

attach to any Authority where any part of its supply system is affected by an event or circumstances of which the Authority could not have reasonably been aware.

(3) Every consumer shall take all reasonable steps to maintain or cause to be maintained free from electrical hazard the installation and every portable or semi-portable appliance and every electric line connected thereto on the consumer's premises, which do not form part of the Authority's supply system.

47. Repair and Disconnection of Hazardous Service Mains - (1) Where an Authority considers that a service main requires repair or reconstruction in whole or in part due to damage, deterioration, or change in land use or for any other reason which may result in a hazard, it shall give the consumer written notice of the defect and work required to be undertaken and may require the consumer to enter into an agreement for the work to be carried out to the requirements of the Authority within 3 months, or earlier if the circumstances so require, at the consumers cost.

(2) Where notice has been served and the consumer has failed to enter into an agreement in accordance with Subclause (1) of this Regulation, the Authority may disconnect the service main after giving 7 days written notice of its intention to disconnect.

(3) When the Authority considers that a service main constitutes a serious electrical hazard, it may immediately disconnect the main. The Authority shall, where practicable, give written notice of its intention to disconnect.

(4) No responsibility shall lie with the Authority in respect of any hazardous service main when the existence of that hazard is not known or could not have been reasonably known or discoverable by the Authority.

48. Repair of Hazardous Distribution Mains - (1) Where an Authority considers that a distribution main requires repair or reconstruction in whole or in part due to damage, deterioration, or change in land use, or for any other reason which may result in a hazard, it shall give to the consumers supplied by that distribution main, written notice of the defect and the work required to be undertaken and shall require the consumer to enter into an agreement for the work to be carried out to the requirements of the Authority within a reasonable period stated in the notice.

(2) The consumers supplied by that distribution main shall bear the cost of such repair or reconstruction.

(3) Where notice has been served and the consumers have failed to enter into agreement in accordance with Subclause (1) of this Regulation the Authority shall undertake the work required and equitably apportion the cost between every consumer supplied by that distribution main.

(4) Where an Authority considers that a distribution main constitutes a serious electrical hazard, it shall immediately undertake the work to remove the hazard where necessary discontinuing supply for the repair, and shall be entitled to equitably apportion the cost between the consumers

supplied by that distribution main.

(5) No responsibility shall attach to any Authority in respect of any hazardous distribution main when the existence of that hazard is not known or could not have reasonably been known or discoverable by the Authority.

49. Removal of Undergrowth and Trees Causing Damage to Works - (1) Any Authority may cut and remove on either side of any works, whether existing or proposed, any undergrowth, tree, or part of any tree which may interfere or may be likely to interfere with any works. The cutting of, or removal of any undergrowth, tree or part of a tree must be done according to accepted international environmental practices for vegetation management.

(2) Should any tree growing on any land cause or be likely to cause damage to any works, the Authority may cause notice to be given to the owner of such land to remove the said tree or any part thereof and should the owner fail to comply with the terms of such notice within the time specified therein (being not less than seven clear days after the time of service of that notice), the Authority may enter upon that land and remove the tree or any part thereof but so that no unnecessary damage is done or incurred thereby.

(3) A copy of the notice under Subclause (2) shall be sent to the Environment Services having jurisdiction over the area relating to Subclause (2).

(4) Any person suffering any damage to property or to that person on account of exercise of power under Subclause (2) shall be entitled to compensation by the Authority. The amount of compensation shall be as agreed upon between the Authority and the person concerned or failing agreement, to be determined in accordance with the law.

50. Authorisation for Operation and Maintenance of Specified Installations - (1) In this Regulation the term 'electricity user' includes any user of electricity, but does not include an Authority.

(2) No electricity user shall operate or maintain any substation, electric line or equipment exceeding low voltage without the written authorisation of the Chief Electrical Inspector. The Chief Electrical Inspector in considering such authorisation shall consult with the Authority licensed to operate in that area. Provided that for the purposes of this Subclause the term "operate" or "maintain" also means to isolate and earth any substation, electric line, or equipment exceeding low voltage for the purpose of working on it or to enliven or carry out any prescribed electrical work on any such substation, electric line, or equipment.

(3) No electricity user shall operate an electrical installation with electrical generating equipment which is capable of operating in parallel with an Authority's supply system without the written authorisation of the Chief Electrical Inspector. The Chief Electrical Inspector in considering such authorisation shall consult with the Authority licensed to operate in that area.

(4) Any such authorisation shall be for a specified period and shall include requirements for the safe operation, maintenance, and supervision of such installations, and the safety of personnel

working on the equipment.

(5) The Chief Electrical Inspector may withdraw the authorisation to operate and maintain such installations if the conditions of the authorisation are not complied with.

51. Inspection of Authority's Lines and Works - (1) At all reasonable times an inspection may be made by an Electrical Inspector of the whole or any part of the Authority's electric lines and works, and the Authority shall provide the Electrical Inspector with all reasonable facilities and assistance.

(2) It shall be lawful for the Chief Electrical Inspector or any person authorised by him in writing, or for any Electrical Inspector at all reasonable times, whether during or after the construction of any works, to enter upon and inspect any such works for the purpose of ascertaining whether the conditions of any licence authorising the works and these Regulations are being diligently complied with and the Authority shall at all times comply with the reasonable requirements of any such person.

(3) If an Electrical Inspector is at any time of the opinion that any electric line or work is not in conformity with the requirements of these Regulations, the Chief Electrical Inspector may, by notice in writing, call upon the Authority or Licensee to carry out such work, within a specified time, as is necessary to make the electric supply line and work comply with these Regulations. Any such line or work shall not be used until the Chief Electrical Inspector has given notice in writing that he is satisfied the line or work is in conformity with these Regulations.

52. Clearance of Overhead Electric Supply Lines Above Ground - (1) Overhead electric supply line conductor shall have the minimum vertical clearance above ground set out in the following table:

TABLE

Voltage and Description of Lines	***Minimum Vertical Clearance Above Ground in Metres***
Exceeding 650 volts but not exceeding 11,000 volts:	
(a) along or across any road or footpath,	6.5
(b) in any other place	5.5
Not exceeding 650 volts:	
(a) Distribution Lines:	
(i) that part of the span connecting to the distribution main or service main and located on the road but not crossing any part of the road used by vehicular traffic	4.0
(ii) any other part of a distribution line along or across the road or private road or way used by vehicular traffic,	5.5
(iii) in any other place.	5.0

(b) Distribution mains and service mains:

(i) along or across any part of a private road or way used or likely to be used by vehicles,	5.5	
(ii) along or across any footpath used only by pedestrians,	4.0	
(iii) for the last span connected to any building or other structure other than over a place to which members of the public have access;		3.5
in a place used or likely to be used by vehicles, elsewhere		2.7
(iv) in any other place	5.0	

(2) All sections of lines not complying with the requirements of Subclause (1) of this Regulation shall be reconstructed or modified within a period of 10 years as a part of a programme of work to be carried out in the order or an assessment of the degree of electrical hazard.

53**.** Installation and Protection of Underground Electric Supply Lines - (1) Underground electric supply lines shall have conductors suitably insulated throughout for their operating voltage and shall be adequately protected against mechanical injury.

(2) Subclause (1) of this Regulation shall not preclude the use of bare earthing conductors underground.

PART VII
EARTHING

54**.** Connection of Alternating Current Systems With Earth - (1) In low voltage alternating current system-

(a) the neutral of a 3 phase 3 wire system shall be multiple earthed; and

(b) the neutral of a single-phase 2 wire system shall be multiple earthed.

(c) the neutral point of a 3 phase 3 wire system shall be established and earthed at the source of supply.

(2) For the purpose of this Regulation a multiple earthed neutral shall be deemed to be a neutral which is earthed-

(a) at the source of supply;

(b) at one or more points along the distribution line; and

(c) on consumer's premises.

(3) In high voltage systems an earthing point shall be provided at the source of supply-

(a) by earthing of the neutral point. Any such system may be earthed at any point in addition if no interference of any description is caused by that earthing; or

(b) by earthing an artificial neutral point obtained from an earthing transformer of sufficient capacity to operate protective equipment; or

(d) by other approved means.

55. Connection of Conductors and Equipment With Earth - (1) All generating station and substation high voltage switching equipment at the site of the earthing point of high voltage systems shall be provided with two separate earthing conductors which shall be taken to separate earth electrodes which may be bonded and to which all metal parts in the generating station or substation not normally alive shall be connected unless otherwise protected.

(2) Lightning arresters shall be earthed by a direct earth connection which presents a low impedance path to high frequency currents and which may in addition be bonded to the multiple earth neutral or to the earthing point of high voltage system.

(3) No stay wires shall be less than 300mm from a telephone line. Stays which are near telephone lines or which are less than 2.5 meters from the ground shall have either a connection to the neutral or separate earthing connection, unless they are in direct and adequate contact with the earth.

(4) Metal towers and poles and other metal which may become alive, but which are in direct adequate contact with earth, are not required to have separate earthing connection. Any such metal may, additionally, be connected to the neutral of a multiple earthed neutral system.

(5) The metal operating handles of all high voltage switching equipment shall be directly earthed unless the handles are adequately insulated.

56. Earthing Connections - (1) Every permanent and temporary earth continuity conductor and earthing connection shall be of adequate current carrying capacity for the purpose for which it is to be used and shall be suitably protected against mechanical damage.

(2) Permanent earths on poles shall be suitably protected against mechanical damage for a distance of 2.5 meters above the ground. The size of the conductor shall not be less than 16 square millimetres of copper or its equivalent current carrying capacity.

(3) The earthing conductor of a street lighting fitting shall be not be less than its phase conductor in cases where it is fully enclosed and not exposed to weather. Where the earthing conductor is exposed to weather, it shall be not less than 4 square millimetres.

(4) Aluminium connections and conductors shall not be used as permanent earthing connections or conductors.

57. Testing of Earths - (1) Before any electric lines, electrical equipment, or other devices are livened, all earthing connection as prescribed shall be tested for the electrical resistance of the earth connections as prescribed in this Regulation.

(2) Earthing connections of high voltage alternating current systems shall have a resistance to earth not exceeding 10 ohms.

(3) Earthing connections of high voltage electrical equipment or other devices mounted less than 2.5 metres above ground level shall have a resistance to earth not exceeding 10 ohms.

(4) The neutral of a multiple earthed neutral system shall have an overall resistance to earth not exceeding 10 ohms. The connection to earth at the source of supply, and at least one other connection to earth where this is practicable, shall be tested independently of the neutral and each shall have not more than 25 ohms resistance.

(5) Except as provided by Subclause (7) of this Regulation, lightning arresters shall have a resistance to earth not exceeding 10 ohms.

(6) Earth connections of high voltage transformers, condensers, and switching equipment other than those referred to in Subclause (3) shall have a resistance to earth not exceeding 100 ohms, except as provided in Subclause (7) of this Regulation.

(7) Where, because of high resistance soils, it is not practicable to obtain the resistance values required under Subclause (5) and (6) of this Regulation then those Subclauses shall not be applicable, but at least 2 suitable electrodes, adequately spaced, shall be provided.

(8) The Authority shall, every two years, examine all earth-continuity conductors and earthing connections within its jurisdiction to ensure that they are effective.

(9) The Authority shall maintain current records of every earth test and inspection made under this Regulation.

PART VIII
SAFETY OF PERSONNEL

58. Qualification of Persons - (1) No person, except a competent person shall carry out or assist in the carrying out of any work on any electric supply line or equipment which is live or is liable to become live in any case where practical knowledge or experience is required in order to avoid danger.

(2) Notwithstanding Subclause (1) of this Regulation, any competent person employed by an Authority may, without being so accompanied -

(a) operate high voltage circuit breakers, air breaker switches, or isolators; or

(b) remove or replace fuse elements or lamps; or

(c) carry out such work as may be necessary to ensure safety of life or property in an emergency.

59. Assistance - (1) No Person shall work on any conductor of any live overheads electric supply line of any voltage or any other live high voltage conductor or equipment unless accompanied by a person competent to assist him.

(2) Notwithstanding Subclause (1) of this Regulation, any competent person employed by an Authority may, without being so accompanied, -

(a) operate high voltage, circuit-breakers, air break switches, or isolators; or

(b) remove or replace fuse elements or links; or

(c) carry out such work as may be necessary to ensure safety of life or property in an emergency.

60. Working Clearance - (1) No person shall carry out work on any live high voltage conductor (whether covered or bare) nor on any low voltage conductor which has exposed live metal between which any other conductor he is likely to make accidental contact, unless such of the safeguards set out and indicated in Regulation 65 of these Regulations as are necessary in the circumstances to make work on the conductor safe are used by him.

(2) No person shall carry out any work on a live high voltage conductor except by means of suitable live-line equipment.

61. Conductors and Equipment to be Earthed - (1) Where any conductor is disconnected from the source of supply and is in proximity to any live high voltage conductor, every person working on the first named conductor shall cause the same to be earthed until all work thereon has been completed.

(2) Every person, before working on any high voltage supply (and liable to become alive), shall cause the conductor or equipment, or both, to be earthed and to remain earthed until all work thereon has been completed.

(3) The requirement for earthing in Subclause (2) of this Regulation shall, wherever possible, be applied in two or more places so that there is at least one earth between the worker and each possible source of supply. In the case of overhead lines, one earth shall be placed on the conductor or the equipment to be worked on as close as practicable to the working position and where possible within visible distance of it.

(4) Every person before working on any low voltage conductor (other than an earthed neutral or middle conductor) shall cause the conductor to be earthed and to remain earthed until all work thereon has been completed if the conductor-

(a) has been disconnected from the source of supply; and

(b) is liable to become alive; and

(c) has exposed metal with which any such person is likely to make contact.

(5) All bare conductors being eradicated under any bare live lines shall be earthed before work commences and shall remain earthed until work is completed.

62**.** Erection of Lines on Existing Poles - Where any new line is being erected on poles or other supports carrying any bare live conductors, then
-

(a) every person engaged in any such erection shall either cause the live conductors to be isolated and earthed or shall not handle the new line unless suitable safeguards are used; and

(b) no person shall be on any crossarm on which the new line is to be erected while the line is being pulled up; and

(c) every person engaged in any such erection shall cause any new bare line to be earthed before erection and to remain earthed until all work on it has been completed.

63**.** Notice on Switches and Circuit Breakers - (1) All switches and circuit breakers isolating conductors or equipment for working on shall have a suitable tag affixed to the operating handle. Any such tag shall have marked thereon **"MEN AT WORK"** or wording of a similar nature, and the tag shall not be removed until the switch or circuit breaker (as the case may be) is again closed by or at the instructions of the person carrying out the work. Provided that where the switch and circuit breaker is under the sole control of and in sight of the person working on the conductors or equipment's, the tag may be omitted.

(2) Any such switches or circuit breakers, when located out of doors, shall always be locked when in the open position. Provided that, where a suitable isolating switch is provided so as to isolate safely any such switch or circuit breaker and is in the open position, only the isolating switch need to be locked.

64. Work on Switchboards - When work has to be carried out on any high voltage switchboard, then, unless the switchboard is otherwise so arranged as to ensure that the work may be carried out without undue risk, either;

(a) the switchboard shall be isolated and earthed; or

(b) if the switchboard is so arranged that the conductors thereof can be isolated in sections, and the sections are separated by permanent or removable screens from all adjoining sections of which the conductors are alive so that work on any section may be

carried out without undue risk, the section on which work has to be done shall be isolated and earthed.

(2) Every generating station or substation switchboard shall be erected in such position as to provide in front and behind the switchboard the clear unobstructed spaces hereinafter mentioned, namely:

(a) in the case of low voltage switchboards, an overhead clearance (except in enclosed spaces referred to in Paragraph (c) of this Subclause of not less than 2.2 metres from the floor to any conductor under which it is necessary to pass, and a passageway in front of the switchboard with at least 1 metre horizontal clearance from the face of the switchboard or any bare live metal affixed thereto;

(b) in the case of high voltage switchboards, other than operating desks or panels working solely at low voltage, an overhead clearance (except in enclosed spaces referred to in Paragraph (c) of this Subclause) of not less than 2.5 metres from the floor to any conductor under which it is necessary to pass, and a passageway in front of the switchboard with at least 1 metre horizontal clearance from the face of the switchboard;

(c) in every enclosed space behind any switchboard where only skilled men would be employed when the switchboard is alive (unless all live metal other than that being worked on is suitably screened);

(i) an overhead clearance of not less than 2.2 metres from the floor to any bare conductor under which it is necessary to pass; and

(ii) a horizontal clearance of not less than 1.8 metres for high voltage, and not less than 1.2 meters for low voltage where it is possible to pass between any live conductors less than 2.2 metres above the floor; and

(iii) a horizontal clearance of not less than 900mm between any live conductor and less than 2.2 metres above the floor and any wall, screen, or similar object.

(3) Where a passageway is provided behind any switchboard, the horizontal clearance shall be at least 1 meter from the back of the switchboard and shall be measured from any screen erected at the back of the switchboard.

65**.** Provision of Safeguards - (1) The Authority, or Contractor or agent of the Authority engaged in the erection or maintenance of electric lines shall provide and maintain in good condition for use where necessary in the circumstances by any person employed by it adequate safeguard necessary in the circumstances as a reasonable protection against hazard including-

(a) insulating gloves, screens, stands, mats and protective covers; and

(b) safety belts, and for each ladder not less than 2 metres of good quality rope having a diameter of not less than 8mm and a breaking strain of not less than 8 kilo newtons; and

(c) temporary earthing devices; and

(d) ropes suitable for pole top rescue.

(2) All insulating gloves shall be marked with their test and working voltage.

66. Use of Safeguards - (1) It shall be the duty of every person working or supervising work on electric supply lines or equipment;

(a) to be satisfied that the safeguards provided are in good physical and mechanical order and condition; and

(b) if any safeguards are found to be physically damaged or substantially deteriorated, to label and place them where they cannot be inadvertently taken for use; and

(c) to arrange their prompt return for repair or disposal as soon as practicable to the Authority, Contractor or agent engaged in the erection or maintenance of electric supply lines.

(2) It shall be the duty of every person working on the lines or equipment to use in a proper manner the safeguards provided.

(3) Where a ladder is used against a pole, the first person to ascend shall immediately tie the top of the ladder to the pole by means of the rope prescribed in Regulation 65 (1) (b) of these Regulations.

(4) No insulating gloves shall be used unless they have been tested in accordance with Regulation 67 of these Regulations and have been found to insulate effectively any voltage at which they are likely to be used.

67. Inspection and Testing of Ladders and Safety Equipment - (1) The following equipment shall be given a thorough visual inspection by the Authority, or Contractor or agent of the Authority engaged in the erection or maintenance of electric supply lines at intervals averaging 6 but not exceeding 7 months-

(a) insulating gloves, boots, galoshes, stands, protective covers and mats;

(b) ladders and their associated ropes;

(c) safety ropes and anchorage;

(d) safety belts and harnesses;

(e) earth sticks;

(f) ropes for pole top rescue.

(2) Any equipment specified in Subclause (1) of this Regulation that is found to be physically damaged or substantially deteriorated shall be immediately withdrawn from service and either repaired or destroyed.

(3) In addition to the requirements of Subclause (1) of this Regulation, tests shall be carried out as follows;

(a) insulating gloves shall be tested for insulation by the Authority, or Licensee, or contractor or agent of the Authority not earlier than 7 months prior to issue for use. Only gloves which have been tested and found to insulate effectively for the voltages at which they are likely to be used shall be issued;

(b) safety belts shall be tested by the Authority, or Contractor or agent of the Authority at intervals averaging 6 but not exceeding 7 months. The complete belt with pole strap, rope, or chain attached to the body belt as under working conditions shall be subjected to a static tension of 2.3 kilonewtons.

(4) A record of inspections and tests required under Subclause (1) and (3) of this Regulation and the results thereof shall be kept by the Authority, or Licensee, or Contractor or agent of the Authority for a period of not less than 2 years after the date of inspection or test and shall be available for inspection by the Inspector when required.

68**.** Suitable Clothing to be Worn - Every person, while engaged in working on an overhead line, shall wear such clothing as in the opinion of his employer or his authorised representative is likely to promote the safety of that person, having regard to the nature of the work on which the person is engaged.

69**.** Instructions in Treatment of Electric Shock - Clear instructions in an approved form as to the treatment of persons receiving electric shock shall be affixed by the Authority, or Contractor or agent of the Authority in a conspicuous place in every operating station, substation, store, and workshop building used by the Authority, or Licensee, or contractor or agent of the Authority.

70. Electrical Code of Safety Practice - (1) Every Authority, or Contractor or agent of the Authority engaged in the erection and maintenance of electric lines and works shall comply with the Electrical Code of Safety Practice issued by the Chief Electrical Inspector.

(2) All persons undertaking any work on electric lines or electrical plant or equipment on behalf of an Authority shall comply with the provisions of the said Electrical Code Of Safety Practice.

PART IX
RECORDS, REPORTS AND RETURNS

71**.** Records - (1) From the date of commencement of supply, the Authority shall keep such records as may be necessary to supply annually to the Minister, such information as he may

require.

(2) The Authority shall keep a record of each consumer's installation connected to the system.

(3) The Electrical Inspectorate shall also keep a record showing the names of registered person and Electrical Inspector responsible for inspecting any such installation, together with relevant dates and tests in connection with the inspection of the installation - Provided that where the Electrical Inspectorate has carried out a reinspection under Regulations 34 of these Regulations, the records required under this Subclause need only be those of the most recent reinspection and of any previous defects.

(4) Where a reinspection under Regulation 34 of these Regulations takes place and all defects specified in the records referred to in Subclause (3) of this Regulation have been remedied, those records may be replaced by the records from the reinspection.

(5) The Authority shall prepare and maintain an up-to-date plan showing the location of;

(a) all works, substations, and distribution lines over which the Authority have control except that part of an overhead distribution line span which connects to a service main or distribution main; and

(b) all underground distribution mains and underground service mains; and

(c) all works, substations, and electric supply lines above low voltage that are under the control of any "electricity user", (as defined in Regulation 50 of these Regulations), and are connected to the system of the Authority.

72**.** Reports to the Chief Electrical Inspector - (1) The Authority shall notify the Chief Electrical Inspector of -

(a) every accident to any person which is caused by an electric supply line, plant, or electric equipment forming part of the Authority's supply system or licensee's installation.

(b) every accident of which it becomes aware to any person, which occurs on a consumer's premises due to electrical causes.

(2) For the purpose of Subclause (1) of this is Regulation, the expression "accident to any person" means an accident which results in the death of any person, or which necessitates the person receiving first aid, resuscitation, or other medical treatment.

(3) The notice required to be given to the Chief Electrical Inspector under Subclause (1) of this Regulation shall be given in writing forthwith after the accident or other happening.

(4) All notices shall be given in such form as the Chief Electrical Inspector may require.

73**.** Annual Returns - Every Authority shall not later than the 30th day of September in each year,

furnish as required by that Authority's Act a report on-

(a) financial return for the previous financial year ending on 30th day of June including the valuation of assets, balance sheet and profit and loss account.

(b) return of the operations of the Authority's undertaking during the previous financial year.

PART X
OFFENCES

74. Failure to Comply With Safety of Personnel Requirements - Every person who fails to comply with or acts in contravention of any provision of Regulation 58 to 70 of these Regulations commits an offence against these Regulations, and shall be liable on conviction to a fine not exceeding $5000.00 and where the offence is a continuing one, a further amount not exceeding $50.00 for every day or part of a day during which the offence has continued.

75. Failure to Comply With the Licence or Regulations - Any Authority who-

(a) fails to use and maintain the electric supply lines and works constructed pursuant to its licence in such a manner as to ensure integrity of supply and efficiency of the undertaking in the area of supply; or

(b) fails to observe, perform, fulfil, or keep any of the requirements, conditions, or provisions of the Act, with respect to its licence; or

(c) fails to observe or comply with any of the requirements of these Regulations,

commits an offence against these Regulations, and shall be liable on conviction to a fine not exceeding $5000.00 and where the offence is a continuing one, a further amount not exceeding $50.00 for every day or part of a day during which the offence has continued.

76. Sundry Offences - (1) Every person, other than an Authority who commits an offence against these Regulations for which no other fine is prescribed, shall be liable on a conviction to a fine not exceeding $5000.00 and where the offence is a continuing one, a further amount not exceeding $50.00 for every day or part of a day during which the offence has continued.

(2) Every person who, without lawful authority, tampers with any electric supply line or electric plant or equipment subject to these Regulations, commits an offence and shall be liable on conviction to a fine not exceeding $5000.00 and where the offence is a continuing one, a further amount not exceeding $50.00 for every day or part of a day during which the offence has continued.

PART XI
REGISTRATION, LICENCES AND PRESCRIBED ELECTRICAL WORK

77**.** Requirements for Registration as an Electrical Worker - (1) Registration as an Electrician (E Class) is available to any person on payment of the prescribed fee -

(a) who can produce the necessary evidence that, that person have the overseas qualifications as set out in Schedule F, Part A of these Regulations; or

(b) who can produce the necessary evidence to verify that, that person has completed the criteria, as set out in Schedule B of these Regulations;

that would enable that person, being accepted for qualification by the Cook Islands Electrical Workers Registration Board to fulfill the requirements of Section 18 of the Act.

(2) Registration as an Electrical Mechanic (EM Class) is available to any person on payment of the prescribed fee:

(a) who can produce the necessary evidence that, that person has completed the criteria, as set out in Schedule C of these Regulations;

that would enable that person being accepted for qualification by the Cook Islands Electrical Workers Registration Board to fulfill the requirements of Section 18 of the Act.

(3) Registration as an Electrical Service Technician (EST Class) is available to any person on payment of the prescribed fee-

(a) who has been issued with a New Zealand Electrical Service Technician Certificate; or

(b) any other equivalent overseas certificate; or

(c) who can produce the necessary evidence to verify that, that person has completed the criteria, as set out in Schedule D of these Regulations;

that would enable that person being accepted for qualification by the Cook Islands Electrical Workers Registration Board to fulfill the requirements of Section 18 of the Act.

(4) Registration as a Line Mechanic (LM Class) is available to any person on payment of the prescribed fee-

(a) who can produce the necessary evidence that, that person have the overseas qualification as set out in Schedule F, Part B of these Regulations; or

(b) any other equivalent overseas certificate; or

(c) who can produce the necessary evidence to verify that, that person has completed the criteria as set out in Schedule E of these Regulations;

that would enable that person being accepted for qualification by the Cook Islands Electrical

Workers Registration Board to fulfill the requirements of Section 18 of the Act.

78. Requirement for Application for Practising Licence - (1) Every electrical worker who wishes to carry out electrical work, shall apply to the Board for a Practising Licence.

(2) Subject to Section 19 of the Act, and upon payment of the prescribed fee, an electrical worker shall be entitled to be issued with a Practising Licence.

(3) Line Mechanics employed directly by an Authority shall be exempted from the requirements of this Regulation.

79. Prescribed Electrical work - (1) The following work is prescribed electrical work-

(a) the construction or maintenance of electrical installations or works;

(b) the construction and maintenance of any fixed appliance or semi-portable appliance;

(c) The connection or disconnection of electrical wiring of works, electrical installations, or electrical appliances to or from a power supply, other than by means of a plug, or appliance inlet, or a pin that is inserted into a socket outlet.

80. Prescribed Electrical Work a Registered Electrician may do - (1) Subject to any limiting endorsement imposed under Section 22 of the Act, or any limiting endorsement imposed by the Board, a registered electrician may do any prescribed electrical work.

81. Prescribed Electrical Work a Registered Electrical Mechanic may do - (1) Subject to any limiting endorsement imposed under Section 22 of the Act, or any limiting endorsement imposed by the Board, a registered electrical mechanic may do any prescribed electrical work.

82. Prescribed Electrical Work a Registered Electrical Service Technician may do - (1) Subject to any limiting endorsement imposed under Section 22 of the Act, or any limiting endorsement imposed by the Board, a registered electrical service technician may carry out the following kinds of prescribed work unsupervised-

(a) the maintenance of electrical appliances;

(b) the maintenance or replacement of fittings of works or electrical installations, other than the installation of conductors;

(c) the connection or disconnection of an electrical appliances to or from a conductor that is to supply electricity to that electrical appliance;

(d) the replacement of fuse links;

(e) the construction, repair, or replacement of flexible cords.

(2) A registered electrical service technician may assist in doing any other prescribed electrical work if that technician is supervised by a registered person whose registration allows that person to do that work.

83**.** Prescribed Electrical Work a Registered Line Mechanic may do - (1) Subject to any limiting endorsements imposed under Section 22 of the Act, or any limiting endorsement imposed by the Board, a registered line mechanic may do prescribed electrical work that involves the construction or maintenance of electric lines.

(2) A registered line mechanic may assist in doing any other prescribed electrical work if that line mechanic is supervised by a registered person whose registration allows that person to do the work.

84**.** Prescribed Electrical Work a Trainee may do - (1) A trainee who is being trained for the purposes of obtaining registration may assist in doing any prescribed electrical work that is relevant to the particular class of work for which that trainee is being trained for the purpose of obtaining registration, if the trainee is under the supervision of a registered person whose registration allows that person to do work.

85**.** Safety and Competency Requirements for Electrical Workers - (1) No person may carry out or assist in carrying out any work to which this Regulation applies unless that person is competent to do that work, or is under the supervision of a person who is competent to do that work.

(2) Every employer must take all practicable steps to ensure that any employee of that employer who is carrying out or assisting in carrying out any work to which this Regulation applies is competent to do that work or is under the supervision of a person competent to do the work.

(3) No person may carry out or assist in carrying out, for the first time, work to which this Regulation applies unless that person has satisfactorily completed tuition in the following subject-matter-

(a) safe working practices that are appropriate to the type of work being undertaken;

(b) testing to ensure safety before commencing work, and to ensure safety during and after completion of the work;

(c) cardio-pulmonary resuscitation and basic first aid;

(4) Every person continuing to carry out or to assist to carrying out work to which this Regulation applies must, at intervals not exceeding 24 months, complete refresher courses in the subject-matter specified in subclause (2) of this Regulation.

86**.** Training and Examinations - (1) The Cook Islands Electrical Workers Registration Board may assist in the training and the holding of examinations for candidates who wish to qualify for registration.

Clerk of Executive Council

These Regulations are administered by the Energy Division

SCHEDULE A

PRESCRIBED FEES

The fees payable in this Schedule shall be payable in respect of the matters specified.

Matters in respect of which fee payable	Fee ($)	Provisions of the Act or these Regulations under which fee payable
Application for Electricity Supply Licence:		
(a) Up to 100 kW	56.25	Regulation 5 (1) (g)
(b) Over 100 kW	112.50	Regulation 5 (1) (g)
Application for Wiring Permits:		
(a) Domestic Installation	45.00	Regulation 31 (2)
(b) Temporary Supply Installation	45.00	Regulation 31 (2)
(c) Domestic Installation	78.75	Regulation 31 (2)
- Two/Three Phase Supply	78.25	Regulation 31 (2)
(d) Commercial Installation	146.25	Regulation 31 (2)
(e) Multi-Complex Installation		
(f) Private & Standby Generating Plant		
• Domestic	45.00	Regulation 31 (2)
• Commercial	78.75	Regulation 31 (2)
Application for Re-Inspection:		
(a) Domestic Installation	45.00	Regulation 34 (1)
(b) Domestic Installation		
- Two/Three Phase Supply	78.75	Regulation 34 (1)
(c) Commercial Installation	78.75	Regulation 34 (1)
(d) Multi-Complex Installation	146.25	Regulation 34 (1)
Application for Registration:		
(a) Electrician	67.50	Section 18 (1) (a)
(b) Electrical Mechanic	67.50	Section 18 (1) (b)
(c) Electrical Service Technician	67.50	Section 18 (1) (c)
(d) Line Mechanic	67.50	Section 18 (1) (d)

Application for Practising License:

(a) Electrician	95.65	Regulation 78
(b) Electrical Mechanic	67.50	Regulation 78
(c) Electrical Service Technician	67.50	Regulation 78

SCHEDULE B

QUALIFICATION FOR REGISTRATION AS AN ELECTRICIAN

Requirements 1. Applicants for registration shall have-

Completed a formal course of training or apprenticeship in the Cook Islands which in the Board's opinion incorporates, or is a satisfactory alternative to, the skills and safety instructions outlined in Subclause (2) of this Clause; or

Overseas qualifications as set out in Schedule F, Part A of the Energy Regulations 2006.

2. The skills and safety instructions referred to in paragraph (a) of Subclause (1) of this Clause are as follows:

Electrical isolation procedures;
Use of isolating transformers and residual current devices;
Selection and correct use of tools;
Selection, installation, and connection of;
Cable support systems;
Conduits;
Cable protection;
Tough plastic sheathed and neutral screened cables and PVC conduit wires;
Switchboard and accessories;
Lighting and lighting circuitry
Single and three phase circuitry and accessories;
Single and three phase motors and starters;
Earthing and bonding;
Use of test instruments;
Fault diagnosis and repair of circuits, meters, transformers, and electrical appliances;
Maintenance of circuit breakers and residual current devices;
Safety Instructions

- Safeworking practices;
- Cardio-pulmonary resuscitation;
- Basic First Aid

SCHEDULE C

QUALIFICATIONS FOR REGISTRATION AS AN ELECTRICAL MECHANIC

1. <u>Training and Experience</u> - (1) Applicants for registration shall have-

(a) Completed Level 2 and associated subjects in Level 3 of the Electro Technology course or equivalent, while engaged in a formal course of training or apprenticeship either in the Cook Islands or overseas which in the Board's opinion incorporates, or is a satisfactory alternative to, the skills listed in Subclause (2) of this clause, and have either:

(i) Practical on the job experience under a competency based or similar formal training system, that incorporates the skills outlined in Subclause (2) of this Clause, including not less that 4,000 hours (two years) on wiring installation skills, as confirmed by employers in log books or detailed in references or certificates; or

Not less than 10 years experience in a range of work that the Board deems to be equivalent to that specified in paragraph (i) of this Subclause and includes not less than 4,000 hours (two years) of wiring installation work;

Or

(b) Overseas qualifications, which in the Board's opinion incorporates, or is a satisfactory alternative to, the skills and safety instructions outlined in Subclause (2) of this Clause.

(2) The skills referred to in paragraphs (a) and (b) in Subclause (1) of this Clause are as follows:

Electrical isolation procedures:
Use of isolating transformers and residual current devices.
Selection and correct use of tools;
Selection, installation and connection of;
Cable support systems;
Conduits;
Tough plastic sheathed and neutral screened cables and PVC conduit wires;
Switchboard and accessories;
Lighting and lighting circuitry;
Single and three phase circuitry and accessories;
Single and three phase motors and starters;
Earthing and bonding;
Use of test instruments;
Fault diagnosis and repair of circuit, meters, transformers, and electrical appliances;
Transformers and electrical appliances:
Maintenance of circuit breakers and residual current devices;
Safety Instructions;

Safe working practices;
Cardio-pulmonary resuscitation;
Basic First Aid

SCHEDULE D

QUALIFICATIONS FOR REGISTRATION AS AN ELECTRICAL SERVICE TECHNICIAN

1. <u>Requirements</u> - (1) Applicants for registration must have-

(a) Completed a formal course of training or apprenticeship in the Cook Islands which in the Board's opinion incorporates, or is a satisfactory alternative to, the skills and safety instructions outlined in Subclause (2) of this Clause; or

(b) Overseas qualifications which in the Board's opinion incorporates, or is a satisfactory alternative to, the skills and safety instructions outlined in Subclause (2) of this Clause.

(2) The skills and safety instructions referred to in paragraphs (a) and (b) of Subclause (1) of this Clause are as follows:

Electrical isolation procedures;
Selection and correct use of tools;
Use and care of test instruments;
Installation and replacement of fuse links;
Selecting, replacing, repairing, and fitting flexible cables, flexible cords, and fittings connected to those flexible cords;
Fault diagnosis on circuits, conductors, and electrical appliances;
Selecting, replacing, and repairing protection and control fittings;
Selecting and replacing fittings (but not including any work on any switchboard or conductor);
Test procedures for fittings and electrical fittings;
Use of isolating transformers;
Use and testing of residual current devices designed for the protection of personnel using electrical appliances;
Electric motors, and fixed wired appliances, including the following isolation procedures:

- Connection and disconnection;
- Repair and maintenance;
- Reversing.

Assembly of flexible leads, and fittings connected to those flexible leads;
Safety Instructions:

Safework practices;
Cardio-pulmonary resuscitation;
Basic First Aid.

SCHEDULE E

QUALIFICATIONS FOR REGISTRATION AS A LINE MECHANIC

1. <u>Requirements</u>

1. Applicants for registration must have-
   (a) Completed a formal course of training or apprenticeship in the Cook Islands which in the Board's opinion incorporates, or is a satisfactory alternative to, the skills and safety instructions outlined in Subclause (2) of this Clause; or
   (b) Overseas qualifications as set out in Schedule E, Part B of the Energy Regulations 2006.

2. The skills and safety instructions referred to in paragraphs (a) and (b) of Subclause (1) of this Clause are as follows:

Isolation, testing, and earthing of lines and their fittings;
Testing of supports, lines and their fittings;
Liven of lines and their fittings, and of electrical installations and works;
Use and maintenance of personnel safety equipment;
Use and care of test equipment;
Rescue from contact with live fittings or equipment;
Resuscitation on the ground, on a structure, and in a cable pit;
Install or replace conductors on supports carrying live conductors or de-energised conductors, or isolated and earthed conductors;
Erect supports;
Provide support for unsafe supports;
Dismantle disused supports and fittings;
Select and install stays and guys;
Select and fit fittings to supports;
Replace live low voltage conductors on poles carrying live high and/or low voltage conductors;
Maintain and inspect isolated and earthed overhead electric lines;
Select and fit cross arms, braces, and insulators;
Maintenance and operation of live low and high voltage overhead lines;
Ascertain whether a support is safe to use as a working platform;
Work on underground systems of electricity supply;
Fell or trim trees and vegetation in the proximity of live overhead electric lines;
Install and maintain street lights (whether reticulated by overhead or underground lines);
Install pad mounted, ground mounted, and support mounted fittings and earthing systems;
Install, connect, maintain, and test earthing systems;
Install, maintain, and test fittings for transformers;
Take readings, and record results, from instruments, meters, and relays;
Use, maintenance, and storage of tools and associated equipment;
Safety Instructions:
Safework practices;
Cardio-pulmonary resuscitation
Basic First Aid.

SCHEDULE F

OVERSEAS QUALIFICATIONS
PART A - ELECTRICIANS

Overseas Qualifications	Further Conditions
AUSTRALIA LE = Licensed by Examination AT - Apprentice Trained	
New South Wales Electrical Contractors License endorsed AT or LE. Electricians License endorsed AT or LE. "A" Grade Electrical Mechanics License endorsed AT or LE.	Nil
Northern Territory "A" Grade Electrical Mechanics License endorsed AT or LE.	Nil
Queensland Certificate of Competency as an Electrical Mechanic endorsed AT or LE. Certificate of Competency as an Electrical Fitter and Electrical Mechanic endorsed AT or LE.	Nil
South Australia "A" Class Electrical Workers Licence endorsed AT or LE.	Nil
Tasmania "A" Grade Electrical Mechanics Licence endorsed AT or LE.	Nil
Victoria "A" Grade Electrical Mechanics License endorsed AT or LE.	Nil
Western Australia **"A" or "B" Grade Electrical Workers License for Electrical Fitting and Uninstalling endorsed AT or LE.**	Nil
NEW ZEALAND	
Electrician Registration Certificate	Nil
FIJI	
A current Wiremen's Licence	Nil

UNITED KINGDOM	
Ordinary or Higher National Certificate in Electrical Engineering	Nil
City and Guilds Intermediate Grade Electrical Engineering Practice AC and DC	Nil
City and Guilds Final Grade Electrical Practice Parts 1 and 2	Nil Engineering
City and Guilds Electrical Installation Work Courses "B" or "C" Certificate	Nil
City and Guilds Intermediate Electrical Technicians Certificate	Nil
City and Guilds Colliery Electricians Craft Certificate	Nil
City and Guilds Colliery Electrical Technician Certificate	Nil
City and Guilds Advanced Colliery Electronic Principles	Nil
BTEC (or TEC) National Certificate in Electrical Engineering	Nil
Scotvec (Scottish Vocational Education Council) Higher Certificate in Electrical and Electronic Engineering	Nil
NETHERLANDS	
Netherlands Electrical Technician TSI or Advanced Craftsman EML Certificate	Nil
SOUTH AFRICA	
Installation Electrician Licence	Nil

PART B - LINE MECHANICS

Overseas Qualifications	**Further Conditions**

AUSTRALIA

New South Wales A certificate of service issued under The Overhead Line (Workers) Regulations 1964	Nil
Queensland Certificate of Competency as a Lineman	Nil
Victoria EVC certificate	Nil

NEW ZEALAND

Line Mechanic Certificate	Nil