

AUSTRALIAN CAPITAL TERRITORY

UTILITIES ACT 2000

DETERMINATION OF TECHNICAL CODES

INSTRUMENT NO. 369 OF 2000

In accordance with subsection 236 (1) of the *Utilities Act 2000*, I hereby determine each of the technical codes named:

1. Electricity Distribution (Supply Standards) Code December 2000;
2. Contestable Work Accreditation Code December 2000;
3. Franchise Customer Electricity Metering Code December 2000;
4. Management of Electricity Network Assets Code December 2000;
5. Electricity Service and Installation Rules Code December 2000;
6. Water Supply and Sewerage Service Standards Code December 2000;
7. Water Metering Code December 2000;
8. Water and Sewerage Network (Design and Maintenance) Code December 2000;
9. Dam Safety Code December 2000;
10. Water and Sewerage Service and Installation Code December 2000;
11. Emergency Planning Code December 2000;
12. Gas Safety and Operating Plan Code December 2000; and
13. Gas General Metering Code December 2000;

to be a technical code.

Dated this 21 day of December 2000

Signed

Brendan Michael Smyth MLA
Minister for Urban Services

Electricity Distribution (Supply Standards) Code

December 2000



AUSTRALIAN
CAPITAL TERRITORY

TABLE OF CONTENTS

1.	APPLICATION AND PURPOSE OF THIS CODE	1
1.1	Application	1
1.2	Purpose	1
2.	DICTIONARY	1
2.1	Dictionary Attached	1
3.	EFFECT OF CODE	1
3.1	Code Not to be Taken to Limit Alternative Standards	1
4.	FREQUENCY	1
4.1	Frequency	1
5.	VOLTAGE	1
5.1	Nominal Voltage	1
5.2	Rapid Fluctuations in Supply Voltage	1
5.3	Voltage Dips	2
5.4	Switching Transients	2
5.5	Voltage Differences Between Neutral and Earth	2
5.6	Earth Potential Rises	2
5.7	Voltage Unbalance	2
5.8	Direct Current	3
5.9	Harmonic Content of Voltage and Current Waveforms	3
6.	LIGHTNING	3
6.1	Obligation of Electricity Distributor to Observe Good Industry Practice	3
6.2	Customer Awareness	3
7.	SUPPLY RELIABILITY	3
7.1	Reliability Targets	3
7.2	Content of Reliability Targets	4
8.	LEVELS OF SUPPLY CAPACITY	4
8.1	Contract to Ensure Supply Capacity	4
9.	LEVELS OF ELECTROMAGNETIC FIELDS	4
9.1	National Health and Medical Research Council (NHMRC) Guidelines	4
9.2	Inductive Interference	4
10.	MONITORING QUALITY OF SUPPLY	4
10.1	Distributor to Report Annually	4
	SCHEDULE 1: VOLTAGE DIPS	5
	SCHEDULE 2: MINIMUM SUPPLY RELIABILITY TARGETS	6
	DICTIONARY	7

1. APPLICATION AND PURPOSE OF THIS CODE

1.1 Application

This Code applies to **Electricity Distributors**.

1.2 Purpose

The purpose of this Code is to prescribe minimum standards for the quality and reliability of electricity distributed through **Electricity Networks**.

2. DICTIONARY

2.1 Dictionary Attached

The dictionary at the end of this **Electricity Distribution (Supply Standards) Code** is part of this Code.

3. EFFECT OF CODE

3.1 Code Not to be Taken to Limit Alternative Standards

Nothing in this Code is to be taken to prevent an **Electricity Distributor** agreeing with an **Electricity Supplier** to distribution supply standards otherwise than as prescribed under this Code and agreed with the **Customer** in a **Negotiated Customer Contract**.

4. FREQUENCY

4.1 Frequency

An **Electricity Distributor** has no obligation with respect to the frequency of its **Electricity Network**.

5. VOLTAGE

5.1 Nominal Voltage

An **Electricity Distributor** must specify a standard system **Nominal Voltage** for its **Electricity Network** that complies with **Australian Standard 2926** or **Australian Standard 60038**.

5.2 Rapid Fluctuations in Supply Voltage

An **Electricity Distributor** must include provisions in its **Standard Customer Contract** to the effect that:

- (1) if a **Customer** notifies the **Electricity Distributor** that they believe another **Customer's** equipment is having adverse effects on its electricity supply, the **Electricity Distributor** must conduct a test at the **Point of Common Coupling**;

- (2) the **Electricity Distributor** may require the **Customer** to pay for any test conducted under subclause 5.2(1); and
- (3) if, as a result of the test referred to in subclause 5.2(1), the **Electricity Distributor** is made aware that the limits of **Australian Standard 2279.4** or **AS/NZS 61000.3.3:1998** are being exceeded, the **Electricity Distributor** must take whatever reasonable steps are necessary to require the other **Customer** to rectify the situation.

5.3 Voltage Dips

- (1) Subject to subclause 5.3(2) an **Electricity Distributor** must take all reasonable steps to ensure that the number of **Voltage Dips** per **Point of Supply** does not exceed the numbers corresponding to the relevant magnitude of the **Voltage Dip** as set out in Schedule 1 to this Code.
- (2) An **Electricity Distributor's** obligation under subclause 5.3(1) is subject to there being no **Voltage Dips** due to the operation or failure of equipment in the **Electrical Installation** or due to **Voltage Dips** caused by events associated with the **Transmission Network** or from the generation of electricity.

5.4 Switching Transients

- (1) Subject to subclause 5.4(2) an **Electricity Distributor** must take all reasonable steps to ensure that **Switching Transients** on its **Electricity Network** are limited to less than two times normal supply volts.
- (2) The obligation in subclause 5.4(1) does not apply to the extent that **Switching Transients** are generated by equipment operating within an **Electrical Installation**.

5.5 Voltage Differences Between Neutral and Earth

- (1) An **Electricity Distributor** must take all reasonable steps to ensure that voltage differences between neutral and earth are limited to 10 volts steady state (5 minute average) at the **Point of Supply**.
- (2) The obligation in subclause 5.5(1) does not apply to voltage differences between neutral and earth caused by equipment operating within an **Electrical Installation**.

5.6 Earth Potential Rises

An **Electricity Distributor** must take all reasonable steps to comply with the requirements for step and touch voltage outlined in Electricity Association of NSW publication EC5 - *Guide to Protective Earthing* and in ESAA publication C(b)(1) - *Guidelines for Design and Maintenance of Overhead Distribution and Transmission Lines*.

5.7 Voltage Unbalance

An **Electricity Distributor** must take all reasonable steps to ensure that the voltage of electricity distributed through its **Electricity Network** does not exceed:

- (1) a 6% difference between the highest and lowest phase to neutral or phase to phase steady state voltage (five minutes average) for the **Low Voltage Network**; and
- (2) a 3% difference between the highest and lowest phase to phase steady state voltage (five minutes average) for the **High Voltage Network**.

5.8 Direct Current

An **Electricity Distributor** must take all reasonable steps to ensure that electricity distributed through its **Electricity Network** does not exceed a direct current voltage component of the neutral conductor with respect to earth of more than plus or minus 10 volts at the **Point of Supply**.

5.9 Harmonic Content of Voltage and Current Waveforms

An **Electricity Distributor** must include provisions in its **Standard Customer Contract** to the effect that:

- (1) if a **Customer** notifies the **Electricity Distributor** that another **Customer's** equipment or appliance is generating **Harmonic** levels at the **Point of Common Coupling** in excess of the levels specified in **Australian Standard 2279.2** or **AS/NZS 61000.3.2:1998**, the **Electricity Distributor** must conduct a test at the **Point of Common Coupling**;
- (2) the **Electricity Distributor** may require the **Customer** to pay for any test conducted under subclause 5.9(1); and
- (3) if the results of a test referred to subclause 5.9(1) indicate that the limits of **Australian Standard 2279.2** or **AS/NZS 61000.3.2:1998** are being exceeded, the **Electricity Distributor** must take whatever reasonable steps are necessary to require the other **Customer** to rectify the situation.

6. LIGHTNING

6.1 Obligation of Electricity Distributor to Observe Good Industry Practice

An **Electricity Distributor** must comply with **Good Electricity Industry Practice** to minimise the risk of damage due to lightning strikes on, or near, the **Electricity Network**.

6.2 Customer Awareness

An **Electricity Distributor** must make all reasonable efforts to make **Customers** aware of lightning protection measures.

7. SUPPLY RELIABILITY

7.1 Reliability Targets

- (1) An **Electricity Distributor** must, before 31 December each year, publish its targets for the reliability of supply for the following year.

- (2) Where groups of **Customers** are expected to receive substantially different levels of service, separate targets should be set under clause 7.2 below.
- (3) At a minimum, reliability targets should be as advantageous to **Customers** as the reliability targets specified in Schedule 2 to this Code

7.2 Content of Reliability Targets

Targets for the reliability of electricity supply for **Customers** must include:

- (1) the total time **Customers** may experience loss of supply, expressed as the Customer Average Interruption Duration Index (CAIDI);
- (2) the frequency with which supply to **Customers** may be interrupted, expressed as the Supply Average Interruption Frequency Index (SAIFI); and
- (3) the duration of interruptions to supply that **Customers** may experience, expressed as the System Average Interruption Duration Index (SAIDI).

8. LEVELS OF SUPPLY CAPACITY

8.1 Contract to Ensure Supply Capacity

An **Electricity Distributor** must include provisions in its **Standard Customer Contract** to the effect that the **Electricity Distributor** will take all reasonable steps to ensure that its **Electricity Network** will have sufficient capacity to make an agreed level of supply available at the **Point of Supply**, providing that the **Customer** has complied with the requirements of the **Service and Installation Rules** and has paid any applicable fees.

9. LEVELS OF ELECTROMAGNETIC FIELDS

9.1 National Health and Medical Research Council (NHMRC) Guidelines

An **Electricity Distributor** must take all reasonable steps to ensure that electromagnetic fields generated by its **Electricity Network** are kept within the limits prescribed by the NHMRC Guidelines - *RH30 Interim Guidelines on Limits of Exposure to 50/60 Hz Electric and Magnetic Fields (1989)*.

9.2 Inductive Interference

An **Electricity Distributor** must take all reasonable steps to ensure that inductive interference caused by its network system is within the limits specified in **AS/NZS 2344-1997**.

10. MONITORING QUALITY OF SUPPLY

10.1 Distributor to Report Annually

An **Electricity Distributor** must monitor the quality of supply and report annually to the **Chief Executive** on its performance against each of the standards specified in this Code.

SCHEDULE 1: VOLTAGE DIPS

VOLTAGE DIPS		
Dips down to % of nominal volts	Max Number of Dips (per year per Point of Supply) - Urban	Max Number of Dips (per year per Point of Supply) - Rural
<30%	2	6
30-50%	20	40
50-70%	20	40
70-80%	25	50
80-90%	200	300

SCHEDULE 2: MINIMUM SUPPLY RELIABILITY TARGETS

SUPPLY RELIABILITY TARGETS		
Parameter	Target	Units
Outage time (CAIDI)	74.6	Minutes
Outage frequency (SAIFI)	1.2	Number
Outage duration (SAIDI)	91.0	Minutes

NOTES:

- (1) **CAIDI: Customer Average Interruption Duration Index.** The ratio of total customer hours interrupted to the total customer interruptions. Measured in minutes and indicates an average duration an affected customer is without power.
- (2) **SAIFI: System Average Interruption Frequency Index.** The ratio of total number of customer interruptions to the total number of customers served. This indicates the number of interruptions an average customer experiences.
- (3) **SAIDI: System Average Interruption Duration Index.** The ratio of total customer hours interrupted to total customers served. This is expressed in minutes and indicates the average duration a customer is without power.
- (4) These minimum targets are based on the outcomes achieved by ACTEW Corporation in 1996/97. Source: *Electricity Australia 1998*, published by the Electricity Supply Association of Australia Limited ACN 052 416 083.
- (5) These indices exclude outages of less than one minute and extended outages due to storms. Storms are those outages where 10% or more of customers in an area are affected.

DICTIONARY

- (1) “**Act**” means the *Utilities Act 2000*;
- (2) “**Australian Standard**” or “**AS/NZS**” or “**AS**” means a standard published by Standards Australia;
- (3) “**Chief Executive**” has the same meaning and functions as defined under the **Act**;
- (4) “**Customer**” has the same meaning as in the **Act**;
- (5) “**Electrical Installation**” means the electrical wiring and associated equipment used to convey and to control the conveyance of electricity within **Customer’s Premises**, but does not include any electrical equipment connected to or extending or situated beyond an electrical outlet socket;
- (6) “**Electricity Distribution (Supply Standards) Code**” means the **Electricity Distribution (Supply Standards) Code** approved by the **Minister** as a **Technical Code** under the **Act**;
- (7) “**Electricity Distributor**” means a **Person** who holds a **Utility Services Licence** for the distribution of electricity;
- (8) “**Electricity Network**” has the same meaning as in the **Act**;
- (9) “**Electricity Service and Installation Rules Code**” means the **Electricity Service and Installation Rules Code** approved by the **Minister** as a **Technical Code** under the **Act**;
- (10) “**Electricity Supplier**” means a **Person** who holds a **Utility Services Licence** for the supply of electricity;
- (11) “**Good Electricity Industry Practice**” has the same meaning as in the **National Electricity Code**;
- (12) “**Harmonic**” has the same meaning as in **Australian Standard 2279**;
- (13) “**High Voltage Network**” means the part (if any) of an **Electricity Network** that is used to distribute electricity at voltages in excess of 1 kilovolt;
- (14) “**ICRC**” means the Independent Competition and Regulatory Commission established under section 5 of the *Independent Competition and Regulatory Commission Act 1997*;
- (15) “**Low Voltage Network**” means the part (if any) of an **Electricity Network** used to distribute electricity at voltages of 1 kilovolt or less;
- (16) “**Minister**” means the **Minister** responsible for administering Part 4 of the **Act**;
- (17) “**National Electricity Code**” means the code of conduct approved in accordance with the **National Electricity Law**;
- (18) “**National Electricity Law**” means the **National Electricity Law** agreed to be enacted by New South Wales, Victoria, South Australia, Queensland and the **Territory** pursuant to an agreement made on 9 May 1996 being the schedule (as amended from time to time) to the *National Electricity Act 1996* ((*South Australia*));
- (19) “**Negotiated Customer Contract**” means a contract that is a **Negotiated Customer Contract** for the purposes of Part 6 of the **Act**;

- (20) “**Nominal Voltage**” has the same meaning as in **Australian Standard 2926** or in **Australian Standard 60038**;
- (21) “**Person**” includes a natural person, a firm, an unincorporated association or a body corporate;
- (22) “**Point of Common Coupling**” has the same meaning in this Code as in **Australian Standard 2279**.
- (23) “**Point of Supply**” means the junction of the conductors of the **Electricity Distributor’s Electricity Network** with the **Customer’s Electrical Installation**;
- (24) “**Premises**” has the same meaning as in the **Act**;
- (25) “**Service and Installation Rules**” means **Service and Installation Rules** adopted by an **Electricity Distributor** in accordance with the **Electricity Service and Installation Rules Code**;
- (26) “**Standard Customer Contract**” means a contract that is a **Standard Customer Contract** for the purposes of Part 6 of the **Act**;
- (27) “**Switching Transients**” are transient oscillatory distortions of the voltage waveform lasting from less than 1 microsecond to several milliseconds.
- (28) “**Technical Code**” means a code approved or determined by the **Minister** under Part 5 of the **Act**;
- (29) “**Transmission Network**” has the same meaning as in the **National Electricity Code**;
- (30) “**Utility**” means a **Person** who holds a **Utility Services Licence**;
- (31) “**Utility Services Licence**” means a licence granted to a **Utility** by **ICRC** under the **Act**.
- (32) “**Voltage Dip**” means a single short reduction in supply voltage generally for less than 1 second.

Contestable Work Accreditation Code

December 2000



AUSTRALIAN
CAPITAL TERRITORY

TABLE OF CONTENTS

1.	APPLICATION AND PURPOSE OF THIS CODE	1
1.1	Application.....	1
1.2	Purpose	1
2.	DICTIONARY.....	1
2.1	Dictionary Attached	1
3.	OBLIGATION TO ESTABLISH AN ACCREDITATION SCHEME	1
3.1	Electricity Distributor to Prepare or Adopt Accreditation Scheme	1
3.2	Approval of an Accreditation Scheme Prepared by an Electricity Distributor.....	1
3.3	Compliance by Electricity Distributor with Accreditation Schemes.....	1
3.4	Approval of Accreditation Scheme Developed by Another Person.....	1
4.	CONTENTS OF AN APPROVED ACCREDITATION SCHEME	2
5.	ELECTRICITY DISTRIBUTOR TO KEEP REGISTER OF ACCREDITED PERSONS ..	2
5.1	Electricity Distributor to Make Register Available	2
	DICTIONARY	4

1. APPLICATION AND PURPOSE OF THIS CODE

1.1 Application

This Code applies to Electricity Distributors and Water Utilities (“Utilities”).

1.2 Purpose

The purposes of this Code are to:

- (1) require each Utility to prepare an Accreditation Scheme or adopt an Approved Accreditation Scheme; and
- (2) set out those matters that must be included in an Approved Accreditation Scheme.

2. DICTIONARY

2.1 Dictionary Attached

The dictionary at the end of this Contestable Work Accreditation Code is part of this Code.

3. OBLIGATION TO ESTABLISH AN ACCREDITATION SCHEME

3.1 Utility to Prepare or Adopt Accreditation Scheme

A Utility must:

- (1) prepare its own Accreditation Scheme; or
- (2) adopt an Approved Accreditation Scheme.

3.2 Approval of an Accreditation Scheme Prepared by a Utility

An Accreditation Scheme prepared by a Utility must:

- (1) comply with the terms of this Code; and
- (2) be approved by the Chief Executive.

3.3 Compliance by Utility with Accreditation Schemes

A Utility must comply with all the terms of any Approved Accreditation Scheme under which it is the Accrediting Agency.

3.4 Approval of Accreditation Scheme Developed by Another Person

The Chief Executive may, on his or her own initiative, or at the request of a Utility, approve an Accreditation Scheme developed by another Person. The Chief Executive may, as a condition to granting such approval, require the Accrediting Agency under that Accreditation Scheme to enter into such arrangements with the Chief Executive as the Chief Executive may reasonably require to ensure that the Accrediting Agency complies with the terms of that Accreditation Scheme as if it were bound by this Code.

4. CONTENTS OF AN APPROVED ACCREDITATION SCHEME

An Approved Accreditation Scheme:

- (1) must specify the manner in which an application can be made for accreditation;
- (2) may specify reasonable fees for the granting of accreditation;
- (3) may specify different levels of accreditation;
- (4) must specify the qualifications and training necessary to obtain accreditation;
- (5) may require an accredited **Person** to give undertakings to the **Accrediting Agency** or to a **Utility** to:
 - (a) comply with specified procedures and systems;
 - (b) comply with directions of the **Utility**; and
 - (c) indemnify **Utilities** against loss or damage incurred as a result of any **Contestable Work** carried out by the accredited **Person**;
- (6) may require an accredited **Person** to maintain a specified level of insurance;
- (7) may assign a rating to an accredited **Person** on the basis of the **Accrediting Agency's** assessment of that **Person's** work. The rating is to be related to:
 - (a) the level of supervision required;
 - (b) the **Person** carrying out the **Contestable Work**;
 - (c) the amount of inspection required of the carrying out of the **Contestable Work** by the accredited **Person**; and
 - (d) other factors that the **Accrediting Agency** may determine;
- (8) may specify a term for which accreditation will remain current;
- (9) must specify the grounds upon which and the procedures to be followed before accreditation may be altered, suspended or cancelled;
- (10) must specify the rights of appeal available to an accredited **Person** whose accreditation is altered, suspended or cancelled; and
- (11) must contain such other matters as the **Chief Executive** may require.

5. UTILITY TO KEEP REGISTER OF ACCREDITED PERSONS

5.1 Utilities to Make Register Available

- (1) A **Utility** must make available to the public on request a list of all **Persons** who are accredited to perform **Contestable Work** on the **Utility's Electricity Network** or **Water Network**, as the case may be.

- (2) The list must contain the names and contact details of, and any rating assigned to, such **Persons**.
- (3) The list must be kept up to date.
- (4) Where the **Accrediting Agency** under an **Approved Accreditation Scheme** is not the **Utility** the **Utility** may satisfy its obligations under this clause 5.1 by providing contact details of the **Accrediting Agency** at which such information can be obtained.

DICTIONARY

- (1) "Accreditation Scheme" means a scheme for accrediting Persons to perform Contestable Work under the Contestable Work Accreditation Code;
- (2) "Accrediting Agency" means the Person under any Approved Accreditation Scheme that administers that Approved Accreditation Scheme and grants accreditation;
- (3) "Act" means the *Utilities Act 2000*;
- (4) "Approved Accreditation Scheme" means an Accreditation Scheme that is approved by the Chief Executive under the Contestable Work Accreditation Code;
- (5) "Chief Executive" has the same meaning and functions as defined under the Act;
- (6) "Contestable Work" means connection work that, under Part 6 of the Act, a Customer may elect to have done by a Person accredited under an Accreditation Scheme;
- (7) "Contestable Work Accreditation Code" means the Contestable Work Accreditation Code approved by the Minister as a Technical Code under the Act;
- (8) "Customer" has the same meaning as in the Act;
- (9) "Electricity Distributor" means a Person who holds a Utility Services Licence for the distribution of electricity;
- (10) "Electricity Network" has the same meaning as in the Act;
- (11) "ICRC" means the Independent Competition and Regulatory Commission established under section 5 of the *Independent Competition and Regulatory Commission Act 1997*;
- (12) "Minister" means the Minister responsible for administering Part 4 of the Act;
- (13) "Person" includes a natural person, a firm, an unincorporated association or a body corporate;
- (14) "Technical Code" means a code approved or determined by the Minister under Part 5 of the Act;
- (15) "Utility" means a Person who holds a Utility Services Licence;
- (16) "Utility Services Licence" means a licence granted to a Utility by ICRC under the Act;
- (17) "Water Network" has the same meaning as defined under the Act;
- (18) "Water Services" means services as defined in the Act;
- (19) "Water Utility" is a Utility licensed under the Act to provide Water Services.

Franchise Customer Electricity Metering Code

December 2000



AUSTRALIAN
CAPITAL TERRITORY

TABLE OF CONTENTS

1.	APPLICATION AND PURPOSE OF THIS CODE.....	1
	1.1 Application.....	1
	1.2 Purpose.....	1
2.	DICTIONARY	1
	2.1 Dictionary Attached	1
3.	EFFECT OF CODE	1
	3.1 Code Not to be Taken to Limit Alternative Arrangements	1
4.	ELECTRICITY SUPPLIERS' RIGHTS WITH RESPECT TO METERING EQUIPMENT.....	2
	4.1 Electricity Supplier May Require Installation of Metering Equipment.....	2
5.	SUPPLY OF METERING EQUIPMENT.....	2
	5.1 Electricity Distributor to Supply Metering Equipment.....	2
	5.2 Standard of Metering Equipment.....	2
	5.3 Non-Compliance with Technical Standards	2
	5.4 New Metering Equipment	2
	5.5 Accuracy Standards	2
	5.6 Switching and Time Keeping	3
6.	COST OF SUPPLY OF METERING EQUIPMENT.....	3
	6.1 Cost of Supply of Standard Metering Equipment.....	3
	6.2 Cost of Supply of Non-Standard Metering Equipment	3
7.	OWNERSHIP OF METERING EQUIPMENT.....	4
	7.1 Ownership of Metering Equipment.....	4
8.	INSTALLATION OF METERING EQUIPMENT	4
	8.1 Provisions of Standard Customer Contract.....	4
	8.2 Procedures for Installation.....	4
	8.3 Additional Purposes.....	4
9.	MAINTENANCE AND REPLACEMENT OF METERING EQUIPMENT.....	5
	9.1 Maintenance of Metering Equipment.....	5
	9.2 Unauthorised Interference	5
	9.3 Customer Must Notify Electricity Distributor of Damage Etc.	5
	9.4 Electricity Distributor to Repair Metering Equipment.....	5
	9.5 Cost of Repairs.....	5
10.	ACCESS TO METERING EQUIPMENT	6
	10.1 Customer's Obligations and Cost of Access.....	6
11.	READING OF METERING EQUIPMENT.....	6
	11.1 Frequency of Metering Equipment Readings.....	6

11.2	Check Readings at Request of Customer.....	6
12.	TESTING OF METERING EQUIPMENT	7
12.1	Electricity Distributor May Test Metering Equipment.....	7
12.2	Customer May Request Test.....	7
12.3	When Metering Equipment is Defective.....	7
12.4	Technical Standards.....	7
13.	ADJUSTMENTS TO CUSTOMER ACCOUNTS	7
13.1	Mandatory Standard Electricity Supply Contract Provisions.....	7
13.2	Optional Standard Electricity Supply Contract Provisions	8
14.	METERING INFORMATION.....	8
14.1	Electricity Distributor to Retain Metering Information	8
14.2	Mandatory Standard Customer Contract Provisions	8
14.3	Optional Standard Customer Contract Provisions.....	9
DICTIONARY	10

1. APPLICATION AND PURPOSE OF THIS CODE

1.1 Application

This Code applies to Electricity Distributors and Electricity Suppliers of Franchise Customers.

1.2 Purpose

The purpose of this Code is to set out those matters that relate to electricity metering and with which:

- (1) an Electricity Distributor must comply in providing Electricity Connection Services to Franchise Customers; and
- (2) an Electricity Supplier must comply in providing Electricity Supply Services to Franchise Customers.

2. DICTIONARY

2.1 Dictionary Attached

The dictionary at the end of this Franchise Customer Electricity Metering Code is part of this Code.

3. EFFECT OF CODE

3.1 Code Not to be Taken to Limit Alternative Arrangements

Nothing in this Code is to be taken to prevent:

- (1) an Electricity Distributor or an Electricity Supplier (as the case may be) and a Franchise Customer agreeing upon a means of measuring and recording the consumption of electricity on the Premises of the Customer otherwise than as prescribed under this Code;
- (2) an Electricity Distributor including provisions in its Standard Customer Contract that are more advantageous to Franchise Customers, or give additional rights to Franchise Customers, than are prescribed under this Code; or
- (3) an Electricity Supplier including provisions in its Standard Customer Contract that are more advantageous to Franchise Customers, or give additional rights to Franchise Customers, than are prescribed under this Code.

3.2 When Utilities' Obligations do not apply

The obligations imposed on Electricity Distributors and Electricity Suppliers under this Code do not apply in the case of events or conditions, outside the control of the Utility, which may prevent that Utility from complying with this Code.

4. ELECTRICITY SUPPLIERS' RIGHTS WITH RESPECT TO METERING EQUIPMENT

4.1 Electricity Supplier May Require Installation of Metering Equipment

An Electricity Supplier may, as a precondition to its obligation to supply electricity to a Franchise Customer, require the installation of Metering Equipment to measure and record the consumption of electricity on the Premises of the Customer.

5. SUPPLY OF METERING EQUIPMENT

5.1 Electricity Distributor to Supply Metering Equipment

Subject to the provisions of this Code, an Electricity Distributor must supply Standard Metering Equipment to its Franchise Customers.

5.2 Standard of Metering Equipment

Subject to clause 5.3, Metering Equipment supplied by an Electricity Distributor under clause 5.1 must:

- (1) be capable of measuring and recording the consumption of electricity on the Premises of the Customer in accordance with any applicable tariff or other charging arrangements between the Electricity Supplier and the Customer;
- (2) be sealed or have other appropriate protective devices to prevent or detect interference with the Metering Equipment; and
- (3) comply with the Technical Standards.

5.3 Non-Compliance with Technical Standards

An Electricity Distributor is not obliged to change or replace Existing Metering Equipment that does not comply with the Technical Standards.

5.4 New Metering Equipment

All New Metering Equipment specified by an Electricity Distributor must comply with the following:

- (1) an Electricity Distributor must not adopt New Metering Equipment if the equipment has not been tested for compliance with the accuracy standards of this Code;
- (2) New Metering Equipment must be tested in a laboratory accredited for testing energy measuring equipment to the accuracy standards of this Code; and
- (3) an Electricity Distributor must keep records of tests performed under clause 5.4(2) while Metering Equipment of that type remain in service, or for a minimum of seven years, whichever is the longer period.

5.5 Accuracy Standards

An Electricity Distributor must ensure that new Metering Equipment meets the accuracy standards of this Code, outlined below:

- (1) the active energy Meter: an induction energy Meter complies with the performance requirements of Australian Standard 1284.1, or a static energy Meter complies with the performance requirements of Australian Standard 1284.5;
- (2) the current transformer (if applicable): a current transformer complies with Australian Standard 1675 - accuracy class 0.5;
- (3) the voltage transformer (if applicable): a voltage transformer complies with Australian Standard 1243 - accuracy class 0.5;
- (4) the reactive energy Meter (if applicable): when tested as an active energy Meter by altering the phase shift of the voltage with respect to the current, a reactive energy Meter complies with the requirements of clause 4.5(1) above for an active energy Meter.

5.6 Switching and Time Keeping

If tariffs for the sale of electricity vary according to the time of day, Metering Equipment must either:

- (1) include an internal or external clock complying with Australian Standard 1284.7;
- (2) have a clock which is automatically adjusted on each occasion it is accessed electronically, and effectively remain within standards imposed by Australian Standard 1284.7; or
- (3) be controlled by a frequency injection system operated by the Electricity Distributor.

6. COST OF SUPPLY OF METERING EQUIPMENT

6.1 Cost of Supply of Standard Metering Equipment

An Electricity Distributor must supply Standard Metering Equipment to its Franchise Customers at its own Cost.

6.2 Cost of Supply of Non-Standard Metering Equipment

An Electricity Distributor may include provisions in its Standard Customer Contract to the effect that where:

- (1) the Customer requests the Electricity Distributor to supply Non-Standard Metering Equipment; or
- (2) Non-Standard Metering Equipment is required by reason only of a tariff requested by the Customer,

the Customer must pay the difference between:

- (3) the Cost of supply of Standard Metering Equipment; and

- (4) the **Cost** of supply of the **Non-Standard Metering Equipment**.

7. OWNERSHIP OF METERING EQUIPMENT

7.1 Ownership of Metering Equipment

An **Electricity Distributor** may include provisions in its **Standard Customer Contract** to the effect that:

- (1) the **Electricity Distributor** and the **Customer** agree that **Metering Equipment** supplied by the **Electricity Distributor** is not a fixture and is, and remains, the property of the **Electricity Distributor**; and
- (2) the **Customer** must not deal, or purport to deal, with **Metering Equipment** supplied by the **Electricity Distributor** in any way that is, or may be, contrary to the ownership or proprietary interests of the **Electricity Distributor**.

8. INSTALLATION OF METERING EQUIPMENT

8.1 Provisions of Standard Customer Contract

The provisions of an **Electricity Distributor's Standard Customer Contract**:

- (1) may require the **Customer** to pay the **Cost** of installing **Metering Equipment**;
- (2) must give the **Customer** the option of having the **Metering Equipment** installed either by the **Electricity Distributor** or by an **Accredited Service Provider** at the **Customer's Cost**; and
- (3) must require that all **Metering Equipment** be installed in accordance with the **Service and Installation Rules**.

8.2 Procedures for Installation

- (1) An **Electrical Distributor** must have procedures for the installation of **Metering Equipment**. The procedures should include:
 - (a) technical,
 - (b) installation,
 - (c) asset management,
 - (d) maintenance,
 - (e) training, and
 - (f) life cycle requirements.

8.3 Additional Purposes

Metering Equipment may be used for purposes in addition to billing:

- (1) such joint use must not compromise the requirements of this Code; and
- (2) the **Electricity Distributor** must co-ordinate the different uses of the **Metering Equipment**.

9. MAINTENANCE AND REPLACEMENT OF METERING EQUIPMENT

9.1 Maintenance of Metering Equipment

An **Electricity Distributor** must:

- (1) maintain installed **Metering Equipment**, including **Metering Equipment** installed by **Accredited Service Providers**;
- (2) develop and maintain a maintenance plan for **Metering Equipment** covered by this Code, taking account of:
 - (a) the size of the **Customer** load metered;
 - (b) the age of the installed **Metering Equipment**; and
 - (c) the quantity and distribution of the installed **Metering Equipment**.
- (3) if so requested, inform **Customers** of the details of the maintenance plan.

9.2 Unauthorised Interference

An **Electricity Distributor** must use reasonable endeavours, and may include provisions in its **Standard Customer Contract** that require the **Customer** to use reasonable endeavours to protect **Metering Equipment** from unauthorised interference.

9.3 Customer Must Notify Electricity Distributor of Damage Etc.

An **Electricity Distributor** may include provisions in its **Standard Customer Contract** that require the **Customer** to notify the **Electricity Distributor** of any interference with, or defect, or damage to **Metering Equipment** installed on the **Customer's** premises within five **Business Days** of the **Customer** becoming aware of any such interference, defect or damage.

9.4 Electricity Distributor to Repair Metering Equipment

An **Electricity Distributor** must:

- (1) repair or replace any defective or damaged **Metering Equipment** installed on a **Customer's Premises**; and
- (2) replace any broken seal on the **Metering Equipment**,

as soon as reasonably practicable after the **Electricity Distributor** is notified of, or becomes aware of, the defect, damage or broken seal.

9.5 Cost of Repairs

An Electricity Distributor may include provisions in its Standard Customer Contract to the effect that if:

- (1) any defect or damage to Metering Equipment installed on the Customer's Premises was caused by the Customer; or
- (2) any seals on that Metering Equipment were broken or damaged by the Customer,

the Electricity Distributor may require the Customer to pay the reasonable Costs of repair or replacement of that Metering Equipment or the seal.

10. ACCESS TO METERING EQUIPMENT

10.1 Customer's Obligations and Cost of Access

An Electricity Distributor may include provisions in its Standard Customer Contract that:

- (1) require the Customer to ensure that the Electricity Distributor has unhindered access to the Metering Equipment installed on the Customer's Premises to read, test, replace and/or repair that equipment; and
- (2) if a Customer hinders the Electricity Distributor's access to Metering Equipment installed on the Customer's Premises, the Electricity Distributor is entitled to the reasonable Cost of any further attendances at the Customer's Premises to read, test, replace and/or repair that equipment.

11. READING OF METERING EQUIPMENT

11.1 Frequency of Metering Equipment Readings

An Electricity Distributor must read Metering Equipment as frequently as is required for Electricity Suppliers to properly discharge their obligations under the Consumer Protection Code with respect to Customer Accounts.

11.2 Check Readings at Request of Customer

An Electricity Distributor must include provisions in its Standard Customer Contract that:

- (1) allow the Customer to require the Electricity Distributor to carry out a check reading to check the accuracy of a reading given by Metering Equipment installed on the Customer's Premises;
- (2) allow the Customer to only exercise this right once at no cost during each Account Period; and
- (3) allow the Customer to request additional readings at the Customer's Cost.

12. TESTING OF METERING EQUIPMENT

12.1 Electricity Distributor May Test Metering Equipment

An Electricity Distributor may test any Metering Equipment at any time.

12.2 Customer May Request Test

An Electricity Distributor must include provisions in its Standard Customer Contract that:

- (1) allow the Customer to request either the Electricity Distributor or an Accredited Service Provider to test the Metering Equipment installed on the Customer's Premises to ascertain whether that equipment is defective;
- (2) require the test of the Metering Equipment, if to be carried out by the Electricity Distributor, to be carried out within 15 Business Days or as otherwise negotiated with the Customer;
- (3) give both the Customer and the Electricity Distributor the right to be present at any test of Metering Equipment installed on the Customer's Premises; and
- (4) require the Electricity Distributor to pay the Costs of testing Metering Equipment unless:
 - (a) the Customer requests that Metering Equipment installed on the Customer's premises be tested; and
 - (b) the test shows that the Metering Equipment is not defective, in which case the Customer must pay the Costs of the test.

12.3 When Metering Equipment is Defective

For the purposes of this Code, Metering Equipment is defective if it does not measure and record the consumption of electricity to Average Accuracy.

12.4 Technical Standards

An Electricity Distributor or an Accredited Service Provider must test Metering Equipment in accordance with the Technical Standards.

13. ADJUSTMENTS TO CUSTOMER ACCOUNTS

13.1 Mandatory Standard Electricity Supply Contract Provisions

An Electricity Supplier must include provisions in its Standard Electricity Supply Contract that require the Electricity Supplier to adjust a Customer Account if:

- (1) the Metering Equipment installed on the Customer's Premises is defective; or
- (2) a check reading shows that any reading is incorrect.

13.2 Optional Standard Electricity Supply Contract Provisions

An **Electricity Supplier** may include provisions in its **Standard Customer Contract** that allow the **Electricity Supplier** to make a reasonable estimate of the demand for electricity or the quantity of electricity supplied to the **Customer's Premises** for the relevant period:

- (1) where the **Metering Equipment** installed on the **Customer's Premises** cannot be read; or
- (2) where a **Meter** is not installed on the **Customer's Premises**; or
- (3) where the demand for electricity or the quantity of electricity supplied was not registered or was wrongly registered for any period before the date upon which the **Electricity Distributor** becomes aware that:
 - (a) **Metering Equipment** installed on the **Customer's Premises** is not working at all;
 - (b) **Metering Equipment** installed on the **Customer's Premises** is not properly registering the quantity of electricity used, or the demand for electricity, in the **Customer's Premises**; or
 - (c) electricity has been supplied without passing through **Metering Equipment**; or
 - (d) for any reason, metering data is unavailable; or
- (4) where there is substantiated evidence of fraud;

and subsequently, charge the **Customer** for supplying the quantity of electricity, or the demand, so estimated.

14. METERING INFORMATION

14.1 Electricity Distributor to Retain Metering Information

An **Electricity Distributor** must retain **Metering Information** for at least twelve months from the date of the reading.

14.2 Mandatory Standard Customer Contract Provisions

An **Electricity Distributor** must include provisions in its **Standard Customer Contract** that:

- (1) the provisions of the **Consumer Protection Code** with respect to disclosure of **Customer Information** by a **Utility** apply to **Metering Information**;
- (2) require the **Electricity Distributor** to use reasonable endeavours to prevent unauthorised access to **Metering Information**;
- (3) require the **Electricity Distributor**, at the request of the **Customer**, to provide the **Customer** with all **Metering Information** held by the **Electricity Distributor** that concerns the **Customer**; and

- (4) require the Customer to pay the Electricity Distributor's reasonable Cost of providing Metering Information requested under subclause 14.2(3) unless the Metering Information relates to the last Account Period in which case the Electricity Distributor may not charge the Customer for the provision of that Metering Information.

14.3 Optional Standard Customer Contract Provisions

An Electricity Distributor may include provisions in its Standard Customer Contract that provide that Metering Information is the property of the Electricity Distributor.

DICTIONARY

- (1) "Account Period" has the same meaning as in the Consumer Protection Code;
- (2) "Accredited Service Provider" in relation to any Utility Service means a Person who is accredited to perform that work in accordance with the Act;
- (3) "Act" means the *Utilities Act 2000*;
- (4) "Average Accuracy" means:
 - (a) for direct metered electrical installations: the sum of Meter error at light load and four times the error at full load, divided by 5;
 - (b) for current transformer metering installations: the vector sum of the errors of each component that comprises the metering installation (voltage transformer and wiring, current transformer and wiring and the meter); and
 - (c) for Non-Franchise Customers: the accuracy provisions under the National Electricity Code;
- (5) "Australian Standard" or "AS/NZS" or "AS" means a standard published by Standards Australia;
- (6) "Business Day" means a day, other than a Saturday, Sunday or public holiday in the Territory;
- (7) "Consumer Protection Code" means the Consumer Protection Code approved by ICRC as an Industry Code;
- (8) "Cost" includes any cost, charge, expense; outgoing, payment or other expenditure of any nature whatever, including where appropriate all reasonable and proper legal fees;
- (9) "Customer" has the same meaning as in the Act;
- (10) "Customer Account" has the same meaning as in the Consumer Protection Code;
- (11) "Customer Information" has the same meaning as in the Consumer Protection Code;
- (12) "Electricity Connection Services" has the same meaning as in the Act;
- (13) "Electricity Distributor" means a Person who holds a Utility Services Licence for the distribution of electricity;
- (14) "Electricity Service and Installation Rules Code" means the Electricity Service and Installation Rules Code approved by the Minister as a Technical Code under the Act;
- (15) "Electricity Supplier" means a Person who holds a Utility Services Licence for the supply of electricity;
- (16) "Electricity Supply Services" means the supply of electricity from an Electricity Network;
- (17) "Existing Metering Equipment" means Metering Equipment installed before 1 July 2001;
- (18) "Franchise Customer" means a Person who is a Franchise Customer of an Electricity Supplier for the purposes of the Act;

- (19) "Franchise Customer Electricity Metering Code" means the Franchise Customer Electricity Metering Code approved by the Minister as a Technical Code under the Act;
- (20) "ICRC" means the Independent Competition and Regulatory Commission established under section 5 of the *Independent Competition and Regulatory Commission Act 1997*;
- (21) "Industry Code" means a code approved or determined by ICRC under Part 4 of the Act;
- (22) "Law" means any statute, regulation, rule, proclamation, order, ordinance or by-law whether present or future and whether Commonwealth, Territory or otherwise (in this subclause referred to as "Statutory Provision") and includes:
- (a) any such Statutory Provision as amended or re-enacted from time to time; and
 - (b) any statute, regulation, rule, proclamation, order, ordinance or by-law enacted in replacement of any Statutory Provision;
- (23) "Meter" means a device or other apparatus used for measuring and recording the consumption of electricity;
- (24) "Metering Equipment" means equipment necessary for measuring and recording the consumption of electricity and includes the Meter and may also include current transformers, potential transformers, test links, potential fusers, etc;
- (25) "Metering Information" means measurements and recordings taken by Metering Equipment;
- (26) "Minister" means the Minister responsible for administering Part 4 of the Act;
- (27) "National Electricity Code" means the code of conduct approved in accordance with the National Electricity Law;
- (28) "National Electricity Law" means the National Electricity Law agreed to be enacted by New South Wales, Victoria, South Australia, Queensland and the Territory pursuant to an agreement made on 9 May 1996 being the schedule (as amended from time to time) to the *National Electricity Act 1996 (South Australia)*;
- (29) "New Metering Equipment" means Metering Equipment installed on, or after, 1 July 2001;
- (30) "Non-Franchise Customer" means a Person who is a Non-Franchise Customer of an Electricity Supplier for the purposes of the Act;
- (31) "Non-Standard Metering Equipment" means Metering Equipment that is not Standard Metering Equipment;
- (32) "Person" includes a natural person, a firm, an unincorporated association or a body corporate;
- (33) "Premises" has the same meaning as in the Act;
- (34) "Service and Installation Rules" means Service and Installation Rules adopted by an Electricity Distributor in accordance with the Electricity Service and Installation Rules Code

- (35) **"Standard Customer Contract"** means a contract that is a **Standard Customer Contract** for the purposes of Part 6 of the **Act**;
- (36) **"Standard Metering Equipment"** means **Metering Equipment** that is generally supplied by an **Electricity Distributor** to its **Franchise Customers** to measure and record electricity consumed on the premises of those **Customers**;
- (37) **"Technical Code"** means a code approved or determined by the **Minister** under Part 5 of the **Act**;
- (38) **"Technical Standards"** means the requirements with respect to the accuracy of **Metering Equipment** applicable under any **Law** and, to the extent that they are not inconsistent with any applicable **Law**, the provisions of **Australian Standard 1284**;
- (39) **"Territory"** means the Australian Capital Territory;
- (40) **"Utility"** means a **Person** who holds a **Utility Services Licence**;
- (41) **"Utility Service"** has the same meaning as in the **Act**;
- (42) **"Utility Services Licence"** means a licence granted to a **Utility** by **ICRC** under the **Act**.

Management of Electricity Network Assets Code

December 2000



AUSTRALIAN
CAPITAL TERRITORY

TABLE OF CONTENTS

1.	APPLICATION AND PURPOSE OF THIS CODE.....	1
1.1	Application	1
1.2	Purpose	1
2.	DICTIONARY	1
2.1	Dictionary Attached	1
3.	DUTY OF ELECTRICITY DISTRIBUTOR.....	1
3.1	Records of Lines	1
3.2	Serious Electrical Accidents	1
3.3	Safe Design, Construction, Operation and Maintenance	1
3.4	Compliance by Electrical Distributor with Code.....	2
4.	SAFETY PLAN.....	2
4.1	Electricity Distributor to have Safety Plan.....	2
4.2	Electricity Distributor to report annually	2
	SCHEDULE 1: ELECTRICITY NETWORK SAFETY CODE	4
	DICTIONARY.....	34

1. APPLICATION AND PURPOSE OF THIS CODE

1.1 Application

This Code applies to **Electricity Distributors**.

1.2 Purpose

The purpose of this Code is to require **Electricity Distributors** to design, construct, operate and maintain their **Electricity Networks** with reasonable care to avoid injury to any person or property.

2. DICTIONARY

2.1 Dictionary Attached

The dictionary at the end of this **Management of Electricity Network Assets Code** is part of this Code.

3. WHEN UTILITIES' OBLIGATIONS DO NOT APPLY

The obligations imposed on **Electricity Distributors** under this Code do not apply in the case of events or conditions outside the control of the **Electricity Distributor** that may prevent the **Electricity Distributor** from complying with this Code.

4. DUTY OF ELECTRICITY DISTRIBUTOR

4.1 Records of Lines

- (1) An **Electricity Distributor** must maintain a record of all underground and aerial lines under its control. The record must contain details sufficient to enable every line to be located and identified.
- (2) An **Electricity Distributor** must ensure that this information is available to the public during business hours.

4.2 Serious Electrical Accidents

An **Electricity Distributor** must:

- (1) report to the **Chief Executive** all **Serious Electrical Accidents** of which the distributor is aware on its **Electricity Network** or in the **Electricity Distributor's** distribution area; and
- (2) take measures to make other **Persons** aware that they should report **Serious Electrical Accidents** in the **Electricity Distributor's** distribution area to the **Electricity Distributor**.

4.3 Safe Design, Construction, Operation and Maintenance

An **Electricity Distributor** must:

- (1) design, construct, operate and maintain its aerial lines, underground lines, substations, equipment and metering with reasonable care to avoid injury to persons or damage to property;
- (2) ensure that the earthing and protection systems of its **Electricity Network** are designed, installed, operated and maintained with reasonable care to avoid injury to persons or damage to property;
- (3) if operating a low voltage system of supply, ensure that the system is earthed by means of a multiple earthed neutral system or another method consistent with **Australian Standard 3000**; and
- (4) must take all reasonable steps to ensure that work on or near the **Electricity Distributor's Electricity Network** is carried out in a safe manner, using control measures appropriate to the risk and work performed.

4.4 Compliance by Electrical Distributor with Code

An **Electricity Distributor** must comply with all the terms of this Code including matters covered by Schedule 1.

5. SAFETY PLAN

5.1 Electricity Distributor to have Safety Plan

- (1) An **Electricity Distributor** must have a **Safety Plan** that includes a requirement to test, inspect and maintain its **Electricity Network** to ensure that the requirements of this Code are met.
- (2) The **Safety Plan** must incorporate the requirements of Schedule 1 to this Code or any National Electricity Network Safety Code published by the Electrical Supply Association of Australia (ESAA).
- (3) If there is any inconsistency between a provision of the Schedule and another part of this Code, the other part of the Code shall prevail.
- (4) The **Safety Plan** must describe how the **Electricity Distributor** will achieve compliance with the requirements of this Code and provide for modifications to the **Safety Plan** if experience or changes in the **Act** or relevant standards make them necessary.
- (5) The **Electricity Distributor** must provide a copy of the **Safety Plan** to the **Chief Executive** and **ICRC**.
- (6) The **Electricity Distributor** must give the **Chief Executive** any additional information about the **Electricity Distributor's** testing, inspection and maintenance procedures and the results of those procedures that the **Chief Executive** requests in writing and must comply with the request within 15 **Business Days** of the request.
- (7) The **Chief Executive** may undertake independent audits of the procedures used and the information provided to monitor compliance with this Code and to assess electrical safety performance.

5.2 Electricity Distributor to report annually

- (1) The **Safety Plan** must provide for the **Electricity Distributor** to prepare an annual report on compliance with the requirements of the **Safety Plan**.
- (2) The **Electricity Distributor** must provide the **Chief Executive** with a copy of this report within 30 days of the end of the financial year.

SCHEDULE 1: ELECTRICITY NETWORK SAFETY CODE

TABLE OF CONTENTS

1.	PREFACE	6
2.	OBJECTIVES.....	7
3.	SCOPE	7
4.	DEFINITIONS	7
5.	DESIGN AND CONSTRUCTION	11
5.1	Application.....	11
5.2	General.....	11
5.2.1	<i>Electrical Service Conditions and Physical Environment</i>	11
5.2.2	<i>Environmental Consideration</i>	11
5.2.3	<i>Thermal Ratings</i>	11
5.2.4	<i>Short Circuit Ratings</i>	11
5.2.5	<i>Mechanical Loading Conditions</i>	11
5.2.6	<i>Prevention of Unauthorised Access</i>	11
5.2.7	<i>Warning Signs</i>	12
5.2.8	<i>Records</i>	12
5.2.9	<i>Labelling</i>	12
5.3	Overhead lines	12
5.3.1	<i>Safety Clearances</i>	12
5.4	Underground Cables	12
5.4.1	<i>Installation</i>	12
5.4.2	<i>Parts of an Underground Cable Installed Above Ground</i>	12
5.5	Substations.....	12
5.5.1	<i>General</i>	12
5.5.2	<i>Clearances to Exposed Live Electrical Apparatus</i>	13
5.5.3	<i>Structural Design of Buildings and Enclosures</i>	13
5.5.4	<i>Pole Mounted Substations</i>	13
5.6	Earthing and Electrical Protection	14
6.	MAINTENANCE	15
7.	ELECTRICAL WORK PRACTICES	16
7.1	General.....	16
7.2	Qualifications and Training.....	16
7.2.1	<i>General Requirements</i>	16
7.2.2	<i>Employer Responsibility</i>	16
7.2.3	<i>Employees in Training</i>	17
7.3	General Safety Provisions.....	17
7.3.1	<i>Basic Safety Principles</i>	17
7.3.2	<i>Risk Assessment</i>	17
7.3.3	<i>Limits of Approach</i>	17
7.3.4	<i>Temporary Labelling and Danger Tags</i>	18
7.3.5	<i>Hazardous Electrical Occurrences or Effects</i>	18

7.3.6	<i>Precautions for Energisation and Re-energisation of Electrical Apparatus</i>	18
7.3.7	<i>First-aid</i>	19
7.3.8	<i>Protective Clothing</i>	19
7.3.9	<i>Work in Confined Spaces</i>	19
7.4	Switching	19
7.5	Work on low voltage electrical apparatus	19
7.5.1	<i>De-energised LV Electrical Apparatus</i>	19
7.5.2	<i>Live LV Electrical Apparatus</i>	19
7.6	Work on High Voltage Electrical Apparatus	20
7.6.1	<i>De-energised HV Electrical Apparatus</i>	20
7.6.2	<i>Live HV Electrical Apparatus</i>	20
7.7	Work on Overhead Lines.....	20
7.8	Work on or near Underground Cables	21
7.9	Access into Substations	22
7.10	Work in Substations	22
7.11	Tools and Safety Equipment	22
8.	APPENDIX.....	23

1. PREFACE

This Electricity Network Safety Code sets out minimum safety standards for the design, construction, operation and maintenance of electricity networks. The relevant documents referred to in the appendices to this Code should be considered for the design, construction, operation and maintenance of electricity networks and work practices.

The Code is based on a draft national code prepared by the Electricity Supply Association of Australia. The standards, codes and guides that it mentions are adapted from the lists contained in the NSW code from which the national code is being developed and in the corresponding Victorian code. It is likely that in the medium term this Code will be replaced by a final version of the national code and by a national document that identifies applicable standards, guides and codes.

2. OBJECTIVES

This Code is intended to:

- Promote safety as a priority for customers, the public and industry workers.
- Promote nationally consistent practices
- Promote economic efficiency through standardisation
- Simplify the interpretation of regulatory requirements placed upon Network Operators, their employees and their contractors.

3. SCOPE

The Code applies to Network Operators and Service Providers and the work they perform in relation to designing, constructing, operating or maintaining electricity networks.

The design, construction and maintenance provisions of the Code apply to all electricity networks whether or not the network or its components are:

- In service
- Out of service
- Under construction

The electrical work practices in Section 7 of the Code apply to all persons undertaking work on electricity networks or operating electricity networks except where:

- The network cannot be energised by operating work because of the absence of electrical connections to any possible source of electricity supply; or
- It is not possible for any person, material or equipment not insulated for the voltage concerned to come near to any exposed conductor which is live or can be energised by operating work.

The Code also provides for:

- Training and authorisation for work on or adjacent to electricity networks; and
- Reporting guidelines for safety related incidents.

4. DEFINITIONS

- (1) **‘Access Authority’** means any form of authorisation which allows access to, work upon, work in the vicinity of, or testing of electrical apparatus.
- (2) **‘Approved’** means having appropriate organisation endorsement in writing for a specific function.

- (3) **'Authorised Person'** means a person with technical knowledge or sufficient experience who has been approved, or has the delegated authority to act on behalf of an organisation, to perform the duty concerned.
- (4) **'Bare'** in relation to a conductor means not insulated.
- (5) **'Cable'** means an insulated conductor or two or more such conductors laid together, whether with or without fillings, reinforcements or protective coverings.
- (6) **'Confined space'** means confined space as defined in Australian Standard AS2865.
- (7) **'Conductor'** means a wire, cable or form of metal designed for carrying electric current.
- (8) **'Covered Conductor'** means a conductor around which is applied a specified thickness of insulating material. There are generally two types of covered conductor:
 - (a) Covered Conductor (CC) where the nominal covering thickness is independent of working voltage;
 - (b) Covered Conductor Thick (CCT) where the nominal covering thickness is dependent on the working voltage.
- (9) **'De-energised'** means not connected to any source of electrical supply but not necessarily isolated.
- (10) **'Earthed'** means directly electrically connected to the general mass of earth.
- (11) **'Electrical apparatus'** means any electrical equipment, including overhead lines and underground cables, the conductors of which are live or can be made live.
- (12) **'Electricity network'** means transmission and distribution systems consisting of electrical apparatus which are used to convey or control the conveyance of electricity between the generator's point of connection and the customer's point of connection.
- (13) **'Employee'** means a worker engaged by an employer (whether under a contract of employment or apprenticeship) and includes a contractor or sub-contractor, and a person employed by a contractor or sub-contractor, who carries out work for an employer.
- (14) **'Employer'** means a Network Operator or Service Provider, as the case may be who engages an employee.
- (15) **'Energised'** means connected to a source of electrical supply.
- (16) **'Exposed conductor'** means an electrical conductor, approach to which is not prevented by a barrier of rigid material or by insulation which is adequate under a relevant Australian Standard specification for the voltage concerned.

- (17) **'Extra low voltage'** means nominal voltage not exceeding 32 volts a.c. or 115 volts d.c.
- (18) **'Fire rating'** means the minimum period of time during which an element of a structure may be expected to function satisfactorily while subjected to the Standard Fire Test provided for in the Australian Building Code.
- (19) **'High voltage'** or **'HV'** means a nominal voltage exceeding 1,000 volts a.c. or exceeding 1,500 volts d.c.
- (20) **'Instructed person'** means persons adequately advised or supervised by authorised persons to enable them to avoid the dangers which electricity may create.
- (21) **'Insulated'** means separated from adjoining conducting material by a non-conducting substance which provides resistance to the passage of current, or to disruptive discharges through or over the surface of the substance at the operating voltage, and to obviate danger of shock or injurious leakage of current.
- (22) **'Insulated conductor'** means a conductor which is wholly covered with insulating material in accordance with the relevant AS or equivalent.
- (23) **'Isolated'** means disconnected from all possible sources of electricity supply by means which will prevent unintentional energisation of the apparatus and which is assessed as suitable step in the in the process of making safe for access purposes.
- (24) **'Live'** means connected to a source of electrical supply or subject to hazardous induced or capacitive voltages.
- (25) **'Low voltage'** or **'LV'** means nominal voltage exceeding 32 V a.c./115 V d.c. but not exceeding 1000 V a.c./1500 V d.c.
- (26) **'Maximum design temperature'** means the maximum temperature which the conductors may reach under the influence of load current (excluding fault current), ambient temperature of the air and solar radiation.
- (27) **'Mobile plant'** means cranes, elevating work platforms, tip trucks or similar plant, any equipment fitted with a jib or boom and any device capable of raising or lowering a load.

Mobile plant can only be considered as a vehicle when in the normal travelling mode and not in the working mode when determining limits of approach. Helicopters used for barehand live work are excluded from this definition of mobile plant.
- (28) **'Near'** means a situation where there is a reasonable possibility of a person, either directly or through any conducting medium, coming within the relevant safe working distances specified in this Code.
- (29) **'Network Operator'** means the owner, controller or operator of an electricity network.

- (30) **'Nominal voltage (U)'** means the AC (phase to phase RMS) or DC voltage by which a system of supply is designated.
- (31) **'Ordinary Person'** means a person without sufficient training or experience to enable them to avoid the dangers which electrical apparatus may create.
- (32) **'Overhead line'** means any aerial conductor or conductors with associated supports, insulators and other apparatus erected, or in the course of erection, for the purpose of the conveyance of electrical energy.
- (33) **'Other cable systems'** means, telecommunications cables, control cables, aerial earthed cables or electrolysis drainage cables.
- (34) **'Procedure'** means the documentation of a systematic series of actions (or activities) directed to achieve an desired result.
- (35) **'Safe'** means not posing an unacceptable risk to life, health or property.
- (36) **'Safety observer'** means a person competent for the task and specifically assigned the duty of observing and warning against unsafe approach to electrical apparatus.
- (37) **'Screened cable'** means that the insulation covering the conductor cores is covered by a conducting or semi conducting material which is connected to a neutral or earth.
- (38) **'Service Provider'** is a person who undertakes work on an electricity network.
- (39) **'Substation'** or **'Electrical station'** means any premises or place in which high voltage supply is converted, controlled or transformed.
- (40) **'Supply'** means supply of electricity.
- (41) **'Voltage'** means a potential difference between conductors or between conductors and earth.

5. DESIGN AND CONSTRUCTION

Principle

Electrical networks shall be designed and constructed to ensure that they operate in a safe manner.

5.1 Application

This section of the Code applies only to electrical apparatus placed into service on or after the commencement of this Code or to any component of an electricity network which is replaced after that commencement.

5.2 General

5.2.1 Electrical Service Conditions and Physical Environment

In determining the electrical service conditions and the physical environment under which the electrical apparatus will operate, consideration shall be given to the extremes that may reasonably occur, and the likelihood of their occurrence.

An appropriate risk assessment shall be undertaken.

5.2.2 Environmental Consideration

The design and construction of electrical apparatus shall take into consideration relevant environmental issues and concerns, such as electric and magnetic fields (EMF) and bushfire mitigation.

5.2.3 Thermal Ratings

The thermal capacity of electrical apparatus shall be sufficient to pass the electrical load for which they are designed, without reduction of electrical or mechanical properties to a level below that which provides safe operational performance.

5.2.4 Short Circuit Ratings

The electrical apparatus shall be of sufficient capacity to pass short circuit currents which will enable the correct operation of protective devices so that a fault is cleared without reduction of electrical or mechanical properties to a level below that which provides safe operational performance.

5.2.5 Mechanical Loading Conditions

The electrical apparatus shall have sufficient mechanical strength to withstand anticipated mechanical stresses due to environmental and electrical service conditions.

5.2.6 Prevention of Unauthorised Access

All electricity networks shall be designed and constructed to prevent unauthorised access by any person to exposed live parts as far as reasonably practicable.

5.2.7 Warning Signs

Due consideration shall be given to the use of hazard warnings in high risk areas (including any design, installation and maintenance requirements for such hazard warnings of an appropriate authority). These areas include but are not limited to:

- water crossings,
- approved aircraft landing areas,
- substations,
- underground cables, and
- overhead line structures.

5.2.8 Records

Design, construction, operation and maintenance records considered necessary for safety shall be kept in an accessible form.

5.2.9 Labelling

All electrical apparatus shall be clearly identified by labels where the identify or purpose of the apparatus is not obvious, which shall be updated if any network alteration has taken place.

5.3 Overhead lines

5.3.1 Safety Clearances

Overhead lines and cable systems shall be designed and constructed to maintain safety clearances to the ground and buildings or structures, and to other conductors, under the environmental and electrical service conditions determined for the line.

Except within substations, the minimum design clearances shall be obtained by reference to ESAA C(b)1.

5.4 Underground Cables

5.4.1 Installation

Cables shall be installed in a manner that takes into account the local environmental and service conditions, the location of other utilities services and the risk of damage from excavation.

5.4.2 Parts of an Underground Cable Installed Above Ground

Where an underground cable is located above the surface of the ground and accessible to the public, it shall be mechanically protected from where it leaves the ground to a height of 2400mm from any surface on which a person can stand.

5.5 Substations

5.5.1 General

Substations shall be designed and constructed to ensure:

- (a) Compliance with the relevant building codes.
- (b) Safe access and egress.

- (c) The buildings and enclosures are secure and all reasonable care is taken to prevent unauthorised access.
- (d) Plant and equipment meet standards for the safety of persons and the environment.
- (e) Appropriate provision of signage, labelling, warning notices, and barriers.

5.5.2 Clearances to Exposed Live Electrical Apparatus

Substations shall be designed and constructed to:

- (a) Provide safe horizontal and vertical clearances between equipment.
- (b) Provide safe operating and working clearances from exposed live equipment and lines.

5.5.3 Structural Design of Buildings and Enclosures

The requirements of the relevant building codes apply. In addition consideration should be given to:

- (a) the provision for ventilation requirements for plant and equipment,
- (b) the containment of hazardous substances,
- (c) the provision and accessibility of specific fire protection,
- (d) the control of the products of explosion that may occur,
- (e) the effects of impulse loading and forces due to short circuit conditions, and
- (f) safe access to equipment by employees working within the substation.

5.5.4 Pole Mounted Substations

Pole mounted substations shall comply with the following:

- (a) All parts of supporting platforms and equipment which are mounted on or attached to the pole or crossarms, except for conductors, are at a height not less than in Table 1 below:

Table 1: HEIGHT RESTRICTIONS

Location	Height above ground (mm)
More than 500 mm from the vertical projection of the kerbline in the direction away from the vehicular carriageway	3 600
Elsewhere	4 600

- (b) Any electrical apparatus mounted below 3 600mm shall not protrude more than 200mm from the pole and maintain a minimum distance of 500mm from the vertical projection of the kerbline, and
- (c) Any attachments to the pole shall not facilitate unauthorised climbing.

5.6 Earthing and Electrical Protection

To avoid injury from electric shock through step and touch potentials all exposed conductive material which is accessible to persons and which could be energised in the event of a primary insulation failure of the circuit must be effectively earthed.

Earthing and electrical protection systems shall be designed and installed to safely manage abnormal network conditions likely to be experienced, without significantly increasing the risk of injury to people in the vicinity of electrical apparatus.

Earthing and protection systems shall be designed and installed for:

- (a) the reliable passage of fault current,
- (b) the reliable passage of single wire earth return (SWER) load currents to ground and/or source,
- (c) the reliable operation of circuit protection devices,
- (d) safe step, touch and transfer potentials, with respect to the electrical apparatus,
- (e) appropriate co-ordination with other utilities' systems,
- (f) the environmental conditions eg corrosive and electrolysis effects,
- (g) protection against likely mechanical damage, inadvertent interference and chemical deterioration, and
- (h) mechanical stability and integrity of connections.

6. MAINTENANCE

Principle

Electricity networks shall be maintained in a manner that ensures the safety of persons while taking into account reliability of supply and the associated risks.

Electricity networks shall be maintained in accordance with the Network Operator's maintenance plan.

A maintenance plan shall include the following elements:

- (a) a record of network assets required to be maintained,
- (b) a schedule of maintenance activities based on an assessment of risk and a record of maintenance work carried out,
- (c) inspection and/or testing programmes,
- (d) maintenance programmes,
- (e) programmes to manage disused components or those approaching the end of their serviceable life,
- (f) inspection and testing of earthing systems at intervals commensurate with risk of corrosion or mechanical damage to ensure that design requirements are met,
- (g) inspection and maintenance of clearances,
- (h) the minimisation of environmental damage,
- (i) a system of vegetation management designed to ensure public safety,
- (j) the safe disposal of waste products, and
- (k) consideration of Electric and Magnetic Field (EMF) issues .

7. ELECTRICAL WORK PRACTICES

Principle

Work on or near electrical apparatus shall be carried out in a safe manner.

Control measures shall be appropriate to the risk and work performed.

The network operator shall develop and implement appropriate and authorised procedures.

7.1 General

The principles apply to all persons working on or near electrical apparatus.

Such work shall be undertaken in accordance with the relevant Standards, Guides and Codes.

No employee should voluntarily carry out, or be ordered to perform, any activity for which they are not competent.

7.2 Qualifications and Training

7.2.1 General Requirements

Persons shall not be authorised to perform work to which this Code applies unless they:

- (a) have received training which is appropriate for the type of work concerned, and have been approved by the employer after the training has been satisfactorily completed,
- (b) are capable of safely performing the work required to be undertaken,
- (c) have demonstrated competency in the relevant work procedures and safety instructions, and
- (d) have during the previous 12 months, received appropriate instruction and demonstrated competency in rescue and resuscitation procedures that are relevant to the nature of the work such as :
 - CPR,
 - release from live electrical apparatus,
 - rescue from a pole, structure or elevating work platform, or
 - rescue from a confined space.

7.2.2 Employer Responsibility

The employer shall ensure that appropriate training courses have been undertaken by the respective employees so that they can be approved to carry out the required tasks safely and competently. The following shall be considered :

- (a) accreditation of the courses,
- (b) the relevance to the tasks to be performed,

- (c) national competency standards or industry equivalent,
- (d) the course syllabus,
- (e) the facilities for training,
- (f) assessment criteria for the issue of certificates,
- (g) a linkage between in-school and on-the-job training,
- (h) the competency of the training provider,
- (i) competency assessment & the need for refresher training, and
- (j) periodic auditing.

7.2.3 Employees in Training

Employees undergoing training may undertake the work, subject to:

- (a) it being safe to perform, and
- (b) supervision by a qualified and experienced person appropriate for the type of work performed and level of competency of the trainee.

7.3 General Safety Provisions

7.3.1 Basic Safety Principles

All HV electrical apparatus shall be regarded as live until isolated, proved to be de-energised, earthed and short-circuited, and an Access Authority issued according to the Network Operator's approved procedure.

All LV electrical apparatus shall be regarded as live until isolated and proved to be de-energised, in accordance with the Network Operator's approved procedure.

7.3.2 Risk Assessment

All hazards shall be identified and the associated risks assessed and controlled in accordance with an approved procedure prior to working on or near any electrical apparatus.

The risk assessment process shall be regularly monitored to ensure compliance.

7.3.3 Limits of Approach

7.3.3.1 Ordinary and Instructed Persons

Limits of approach to live electrical apparatus will be in accordance with ESAA Guidelines. Where ESAA Guidelines are not available, existing jurisdictional clearances shall apply.

7.3.3.2 Authorised Persons

Limits of approach to live electrical apparatus will be in accordance with ESAA Guidelines. Where ESAA Guidelines are not available, existing jurisdictional clearances shall apply.

For live line work refer to ESAA “Guidelines for Bare Hand Live Line Work”.

7.3.4 Temporary Labelling and Danger Tags

Temporary labelling and danger tags are required as a warning against unintentional and unauthorised operation of electrical apparatus. Employees shall not remove or alter in any way, without consulting the network operator or individual who attached the tag, any tags that have been applied to a device.

7.3.5 Hazardous Electrical Occurrences or Effects

Precautions shall be taken to avoid danger from hazardous electrical occurrences or effects, such as:

- (a) lightning,
- (b) induction,
- (c) step, touch and transferred voltage,
- (d) voltage gradient,
- (e) unintentional line energising,
- (f) neutral and earthing system currents,
- (g) feedback from secondary circuits,
- (h) accidental connection, and
- (i) capacitance.

7.3.6 Precautions for Energisation and Re-energisation of Electrical Apparatus

Electrical apparatus shall not be energised or re-energised unless:

- (a) the electrical apparatus are in a state suitable for energisation,
- (b) all equipment, plant, tools and materials are removed as appropriate,
- (c) all earths, short-circuits and equipotential bonds, if used, are removed,
- (d) appropriate checks and tests are carried out to ensure safety,
- (e) all relevant access authorities are cancelled and all persons are clear, and
- (f) approval is given from the network operator to re-energise.

Energisation and re-energisation shall only be carried out by authorised employees in accordance with the Network Operators approved procedures.

After a fault, consideration shall be given to:

- (a) the geographic location of the apparatus,
- (b) the need for patrol and inspection to determine the cause and impact,

- (c) the time delay between the outage and the proposed re-energisation, and
- (d) assessment of the associated risks, including any fire ban declarations.

7.3.7 First-aid

Appropriate first-aid kits shall be readily available for use in the event of injury.

7.3.8 Protective Clothing

All protective equipment and apparel used shall be in accordance with relevant Standards, Guides and Codes and shall be appropriate to the task being performed.

7.3.9 Work in Confined Spaces

Work in a confined space shall be carried out in accordance with the relevant Standard and the Network Operator's approved procedures.

7.4 Switching

All switching (including earthing) shall be in accordance with the Network Operator's approved procedures to ensure:

- (a) the safety of employees,
- (b) the safety of the public, and
- (c) the correct operation of the electricity network.

7.5 Work on low voltage electrical apparatus

Work on LV electrical apparatus, whether under live or de-energised conditions, shall be in accordance with the Network Operator's approved procedure.

7.5.1 De-energised LV Electrical Apparatus

Work on de-energised LV electrical apparatus shall be carried out in accordance with the Network Operator's approved procedure, with due regard to the following:

- (a) clearly identifying the electrical apparatus,
- (b) isolating the electrical apparatus,
- (c) taking precautions to ensure the electrical apparatus remains de-energised,
- (d) proving the electrical apparatus is de-energised,
- (e) defining the safe work area where appropriate, and
- (f) taking additional precautions such as earthing and short-circuiting of electrical apparatus and/or live working procedures where hazardous induced voltages are likely to occur.

7.5.2 Live LV Electrical Apparatus

Work on live LV electrical apparatus shall be carried out in accordance with the Network Operator's approved procedure, with due regard to the following:

- (a) that the electrical apparatus has been identified as LV,
- (b) that suitable precautions have been taken to avoid inadvertent contact with other live conductors or earth or objects at a different potential,
- (c) that the employee is trained in the safe execution of the work, and
- (d) that the employee wears insulating gloves on both hands.

7.6 Work on High Voltage Electrical Apparatus

7.6.1 De-energised HV Electrical Apparatus

Work on de-energised HV electrical apparatus shall be carried out in accordance with the Network Operator's approved procedure, with due regard to the following:

- (a) isolating the electrical apparatus,
- (b) taking precautions to ensure the electrical apparatus remain de-energised,
- (c) proving the electrical apparatus are de-energised,
- (d) earthing and short-circuiting the electrical apparatus, except for periods where testing is in progress,
- (e) defining the safe work area, conditions and electrical hazards where appropriate, and
- (f) the issue of an Access Authority.

7.6.2 Live HV Electrical Apparatus

Work on live HV electrical apparatus shall be carried out in accordance with the Network Operator's approved procedure, with due regard to the following:

- (a) safety of persons,
- (b) clearly identifying the work area,
- (c) authorisation requirements,
- (d) that the required minimum safe approach and working distances are maintained,
- (e) approved plant, tools and equipment are used,
- (f) use of safety observers to warn people should their approach to live apparatus become hazardous, and
- (g) adjustment of protection and control equipment.

7.7 Work on Overhead Lines

In addition to the other requirements of this Code, it is necessary when working on overhead lines to:

- (a) Identify the overhead circuit to be worked on, at the point where the work is being carried out.
- (b) Check the soundness of poles or structures.
- (c) Prevent the line from becoming inadvertently energised.
- (d) Safeguard employees against hazardous electrical occurrences or effects.
- (e) Take safeguards against traffic hazards.

7.8 Work on or near Underground Cables

Work on or near underground cables shall be in accordance with the Network Operator's approved procedures. Work shall not commence unless the cable has been identified.

The following precautions shall be taken before working on or near cables:

- (a) Identify and safeguard against the electrical hazards that are present on the site. These can include, but are not limited to:
 - live electrical apparatus,
 - induced voltages,
 - transfer potentials,
 - the potential for faults on adjacent cables and joints, and
 - capacitive voltages.
- (b) Identify and safeguard against the physical hazards that are present on the site. These can include, but are not limited to:
 - possibility of mechanical damage to existing cables or joints when excavating or installing cable,
 - collapse or flooding of trenches,
 - lack of ventilation or suitable lighting,
 - dangerous gases,
 - confined working environment,
 - high temperatures,
 - traffic hazards, and
 - other services.
- (c) An employee shall not physically handle a cable, whether sheathed or screened or not, if its condition is suspect or doubtful unless the cable is proved to be de-energised.
- (d) An employee shall not physically handle a high voltage cable while it is live unless it is completely surrounded by an earthed sheath or screen, or both, and precautions are taken, where necessary, to avoid danger from induced voltages and transferred earth potentials.

- (e) A high voltage cable shall be isolated, earthed and proved to be de-energised on site prior to commencing work on the cable.

7.9 Access into Substations

A person shall not enter an area in an electrical substation unless the person:

- (a) is approved by a Network Operator to enter that area, or
- (b) is accompanied by a person who is approved to enter that area, or
- (c) has been specifically instructed by an authorised person as to the area that can be entered, the dangers that exist and the precautions that must be observed.

7.10 Work in Substations

Work in substations shall be in accordance with the Network Operator's approved procedures.

7.11 Tools and Safety Equipment

The employer shall ensure that:

- (a) Appropriate tools and safety equipment are available.
- (b) All tools and safety equipment shall be periodically inspected and tested where necessary to ensure their safety for use.
- (c) Any defective tools or safety equipment shall be withdrawn from service.

The employee shall:

- (a) Use appropriate tools and safety equipment.
- (b) Inspect tools and safety equipment to check their serviceability before use.
- (c) Not use any suspected defective tool or safety equipment.

8. APPENDIX

Australian Standards, Codes and Guides relating to the Design, Construction, Maintenance and Safe Electrical Operation and Work Practices for Distribution Systems

Section A—Standards, Codes and Guides Relating to Aerial Lines and Services

The standards and publications listed below (and any associated amendments) are relevant to this Code but do not necessarily represent all the standards that may need to be consulted in meeting the requirements of this Code.

Conductors

Conductors—Bare overhead—Hard drawn copper	AS 1746
Conductors—Bare overhead—Aluminium and aluminium alloy	AS 1531
Conductors—Bare overhead—Aluminium and aluminium alloy— Steel reinforced	AS 3607
Steel conductors and stays—Bare overhead	
Part 1: Galvanised (SC/GZ)	AS 1222.1
Part 1: Aluminium clad (SC/AC)	AS 1222.2
Galvanised steel wire strand	AS 2841

Insulated Cables

Approval and test specification—Electric cables—Elastomer insulated—For working voltages up to and including 0.6/1 kV	AS/NZS 3116
Approval and test specification—Electric cables—Thermoplastic insulated—For working voltages up to and including 0.6/1 kV	AS 3147
Approval and test specification—Electric cables—Neutral screened—For working voltages up to and including 0.6/1 kV	AS/NZS 3155
Electric cables—XLPE insulated—Aerial bundled—For working voltages up to and including 0.6/1 kV	AS 3560
Mechanical fittings for low voltage aerial bundled cable	AS 3766
Electric cables—Aerial bundled—Polymeric insulated—Voltages 6.35/11 kV, 12.7/22kV	
Part 1: Metallic screened	AS 3599.1
Part 2: Non-metallic screened	AS 3599.2
Conductors—Covered overhead—For working voltages 6.35/11 kV up to and including 19/33 kV	AS 3675

Insulators

Guidelines for the design and maintenance of overhead distribution and transmission lines	ESAA C(b)1 Section 4
Insulators—Ceramic or glass—Station post for indoor and outdoor use—Voltages greater than 1000 V a.c.	
Part 1: Characteristics	AS 4398.1
Part 2: Tests	AS 4398.2
Insulators—Porcelain and glass for overhead power lines— Voltages greater than 1000 V a.c.	
Part 1: Test methods	AS 2947.1
Part 2: Characteristics	AS 2947.2
Part 3: Couplings	AS 2947.3
Insulators—Porcelain and glass, pin and shackle—Voltages not exceeding 1000 V a.c.	AS 3608
Insulators—Porcelain stay type—Voltages greater than 1000 V a.c.	AS 3609

Insulator and Conductor Fittings

Insulator and conductor fittings for overhead power lines	
Part 1: Performance and general requirements	AS 1154.1
Part 2: Dimensions	AS 1154.2
Part 3: Performance and general requirements for helical fittings	AS 1154.3
Connectors—Insulation piercing—For 0.6/1 kV aerial bundled cables	AS 4396 (Int)

Thermal Limits

Guidelines for the design and maintenance of overhead distribution and transmission lines—Thermal limits	ESAA C(b)1 Appendix A2
Current rating of bare overhead line conductors	ESAA D(b)5

Short Circuit Capacity

Guidelines for the design and maintenance of overhead distribution and transmission lines—Fault ratings	ESAA C(b)1 Appendix A2
---	------------------------

Mechanical Loading Conditions

Guidelines for the design and maintenance of overhead distribution and transmission lines—Mechanical loading conditions	ESAA C(b)1 Section 3
Minimum design loads on structures (SAA loading code)	
Part 1: Dead and live loads and load combinations	AS 1170.1
Part 2: Wind loads	AS 1170.2
Part 3: Snow loads	AS 1170.3
Part 4: Earthquake loads	AS 1170.4

Conductor Tensions

Guidelines for the design and maintenance of overhead distribution and transmission lines	
General	ESAA C (b)1 Section 6
Calculations	ESAA C(b)1 Appendix B

Structures and Footings

Guidelines for the design and maintenance of overhead distribution and transmission lines	ESAA C(b)1 Sections 7 and 8 and Appendix C
Methods of testing soils for engineering purposes	AS 1289 (series)
Rules for the design and installation of piling (SAA Piling Code)	AS 2159
Timber Structures	
Part 1: Design methods	
Part 2: Timber properties	AS 1720.1
Timber—Poles for overhead lines	AS 1720.2
Timber—Classification into strength groups	AS 2209
Design of steel lattice towers and masts	AS 2878
Steel structures	AS 3995
Concrete structures	AS 4100
Concrete poles for overhead line and street lighting	AS 3600
Lighting poles and bracket arms—Preferred dimensions	AS 4065
	AS 1798

Clearances from Ground

Guidelines for the design and maintenance of overhead distribution and transmission lines	ESAA C(b)1 Section 9
---	----------------------

Clearances from Structures

Guidelines for the design and maintenance of overhead distribution and transmission lines

ESAA C(b)1 Section 10

Spacing of Conductors

Guidelines for the design and maintenance of overhead distribution and transmission lines

Clearances

ESAA C(b)1 Section 11

Environmental and loading conditions

ESAA C(b)1 Section 11

Marking of Conductors

Air Navigation—Cables and their supporting structures—
Mapping and marking

Part 1: Permanent marking of overhead cables and their supporting structures

AS 3891.1

Part 2: Marking of overhead cables for low level flying

AS 3891.2

Joint Use of Power Poles

ESAA Model Agreement between an Electricity Supply Utility and a Communication Cable Owner

ESAA Publication

Joint use of poles—The placement on poles of power lines and paired cable telecommunications lines

SAA HB 87

Maintenance

Guidelines for the design and maintenance of overhead distribution and transmission lines—Maintenance and inspection procedure:

ESAA C(b)1 Appendix E

SECTION B—STANDARDS, CODES AND GUIDES RELATING TO CABLES AND SERVICES

The standards and publications listed below (and any associated amendments) are relevant to this Code but do not necessarily represent all the standards that may need to be consulted in meeting the requirements of this Code.

High Voltage Cables

Electric cables—Polymeric insulated

Part 1: For working voltages 1.9/3.3 (3.6) kV up to and including 19/33 (36) kV AS 1429.1

Part 2: For working voltages above 19/33 (36) kV up to and including 76/132 (145) kV AS 1429.2

Electric cables—Impregnated paper insulated—Working voltages up to and including 33 kV AS 1026

Electric cables—For underground residential distribution systems AS 4026

Power cables with extruded insulation and their accessories for rated voltages from 1kV (Um = 1,2 kV) up to 30 kV (Um = 36 kV)

Part 1: Cables for rated voltages of 1 kV (Um = 1,2 kV) and 3 kV (Um = 3,6 kV) IEC 60502.1

Part 2: Cables for rated voltages from 6 kV (Um = 7,2 kV) up to 30 kV (Um = 36 kV) IEC 60502.2

Part 4: Test requirements on accessories for cables with rated voltages from 6 kV (Um = 7,2 kV) up to 30 kV (Um = 36 kV) IEC 60502.4

Power cables with extruded insulation and their accessories for rated voltages above 30 kV (Um = 36 kV) up to 150 kV (Um = 170 kV) - Test methods and requirements IEC 60840

Low Voltage Cables

Electric cables—Impregnated paper insulated—Working voltages up to and including 33 kV AS 1026

Conductors in insulated cables and flexible cords AS 1125

Concentric wire neutral—XLPE insulated—0.6/1 kV AS 1178

Approval and test specification—Electric cables—Elastomer AS 3116

insulated—For working voltages up to and including 0.6/1 kV

Electric cables—Thermoplastic insulated—For working voltages AS 3147

up to and including 0.6/1 kV

Approval and test specification—Electric cables—Neutral AS/NZS 3155

screened—For working voltages up to and including 0.6/1 kV

Electric cables—For underground residential distribution AS 4026

systems

High Voltage Cable Accessories

High voltage cable joints ANSI/IEEE 48

High voltage cable terminations ANSI/IEEE404

Separable insulated connectors for power distribution systems above 1 kV AS 2629

Continuous Cable Ratings

Electric cables - Calculation of the current rating

Part 1: Current rating equations (100% load factor) and calculation of losses

Section 1: General

IEC 60287.1.1

Section 2: Sheath eddy current loss factors for two circuits in flat formation

IEC 60287.1.3

Part 2: Thermal resistance

Section 1: Calculation of thermal resistance

IEC 60287.2.1

Section 2: A method for calculating reduction factors for groups of cables in free air, protected from solar radiation

IEC 60287.2.2

Part 3: Sections on operating conditions

Section 1: Reference operating conditions and selection of cable type

IEC 60287.3.1

Section 2: Economic optimization of power cable size

IEC 60287.3.2

Electrical installations—Selection of cables Part 1: Cables for alternating voltages up to and including 0.6/1 kV Part 1.1:

AS/NZS 3008.1.1

Typical Australian installation conditions

Short Circuit Currents

Calculation of thermally permissible short-circuit currents, taking into account non-adiabatic heating effects

IEC 60949-

Installation

ESAA Guide to the installation of cables underground

ESAA C(b)2

ESAA High voltage insulated separable connectors, selection installation, operation and maintenance guide

ESAA D(b)30

Maintenance

ESAA Guide to the maintenance of high voltage paper/oil insulated cables and accessories

ESAA D(b)31

SECTION C—STANDARDS, CODES AND GUIDES RELATING TO SUBSTATIONS

The standards and publications listed below (and any associated amendments) are relevant to this Code but do not necessarily represent all the standards that may need to be consulted in meeting the requirements of this Code.

Electrical Design

Switchgear assemblies and ancillary equipment for alternating voltages above 1 kV AS 2067

Circuit Breakers and Ancillary Equipment

Degrees of protection provided by enclosures for electrical equipment (IP Code) AS 1939

High voltage a.c. switchgear and controlgear—Circuit breakers for rated voltages above 1000 V AS 2006

Switchgear Assemblies and Ancillary Equipment

High-voltage a.c. switchgear and control-gear—Switches and switch-disconnectors

Part 1: For rated voltages above 1 kV and less than 52 kV AS 1025.1

Part 2: For rated voltages of 52 kV and above AS 1025.2

High voltage a.c. switchgear and controlgear—Disconnectors (isolators) and earthing switches AS 1306

High voltage a.c. switchgear and controlgear—Switch-fuse combinations AS 2024

High voltage a.c. switchgear and controlgear—Common requirements AS 2650

A.C. metal-enclosed switchgear and controlgear for rated voltages above 1 kV and up to and including 72.5 kV AS 2086

A.C. insulation-enclosed switchgear and controlgear for rated voltages above 1 kV and up to and including 38 kV AS 2264

Switchgear assemblies and ancillary equipment for alternating voltages above 1 kV AS 2067

Degrees of protection provided by enclosures for electrical equipment (IP Code) AS 1939

Insulating oil for transformers and switchgear AS 1767

Control Equipment

Low-voltage switchgear and controlgear

Part 1: General rules AS/NZS 3947.1

Part 3: Switches, disconnectors, switch-disconnectors and fuse-combination units AS/NZS 3947.3

Part 4: Contactors and motor-starters

Part 4.1: Electromechanical contactors and motor-starters AS/NZS 3947.4.1

Part 4.2: A.C. semiconductor motor controllers and starters AS/NZS 3947.4.2

Part 5: Control circuit devices and switching elements

Part 5.1: Electromechanical control circuit devices AS/NZS 3947.5.1

Part 5.2: Proximity switches AS/NZS 3947.5.2

Insulating Panels

Sheets and boards for electrical purposes

- Part 1: Classification and general requirements AS 1795.1
- Part 2: Dimensions of switchboard panels AS 1795.2

Power Transformers

Power transformers

- Part 1: General requirements AS 2374.1
 - Part 2: Temperature rise AS 2374.2
 - Part 3: Insulation levels and dielectric tests
 - Part 3.0 General requirements AS 2374.3.0
 - Part 3.1 External clearances in air AS 2374.3.1
 - Part 4: Tappings and connections AS 2374.4
 - Part 5: Ability to withstand short circuit AS 2374.5
 - Part 6: Determination of transformer and reactor sound levels AS 2374.6
- Guide to the selection and use of power transformers AS 2421
- Dry-type power transformers AS 2735
- Loading guide for dry-type power transformers AS 3953
- Insulating oil for transformers and switch gear AS 1767

Bushings

Bushings for alternating voltages above 1000 V AS 1265

Surge Arresters

Surge arrestors (diverters)

- Part 1: Silicon carbide type for a.c. systems AS 1307.1
- Part 2: Metal-oxide surge arresters without gaps for a.c. systems AS 1307.2

Batteries

Stationary batteries—Lead-acid

- Part 1: Vented type AS 4029.1
- Part 2: Valve-regulated sealed type AS 4029.2
- Part 3: Pure lead positive pasted type AS 4029.3

Insulation Co-ordination

Insulation co-ordination

- Part 1: Definitions, principles and rules AS 1824.1
 - Part 2: Application guide AS 1824.2
- Insulation coordination for equipment within low-voltage systems
- Part 1: Principles, requirements and tests IEC 60664.1

Safety Clearances

- Degrees of protection provided by enclosures for electrical equipment (IP Code) AS 1939
- Switchgear assemblies and ancillary equipment for alternating voltages above 1 kV AS 2067

Buildings and Enclosures

Building Code of Australia 1996	
Fixed platforms, walkways, stairways and ladders-Design construction and installation	AS 1657
The use of ventilation and airconditioning in buildings	
Part 1: Fire and smoke control in multi-compartment buildings	AS 1668.1
Part 2: Mechanical ventilation for acceptable indoor air quality	AS 1668.2
Degrees of protection provided by enclosures for electrical equipment (IP Code)	AS 1939
The storage and handling of flammable and combustible materials	AS 1940
Oil	Environment Protection Act and Regulations ESAA D(b)29
Fire protection of electricity substations	
Electrical installations—Secondary batteries installed in buildings	
Part 1: Vented cells	AS 3011.1
Part 2: Sealed cells	AS 3011.2
Electrical installations—Classification of the fire and mechanical performance of wiring systems	AS/NZS 3013
Safety signs for the occupational environment	AS 1319

Switchyard Structures, Footings and Foundations

Minimum design loads on structures (loading code)	
Part 1: Dead and live loads and load combinations	AS 1170.1
Part 2: Wind loads	AS 1170.2
Part 3: Snow loads	AS 1170.3
Part 4: Earthquake loads	AS 1170.4
Design of steel lattice towers and masts	AS 3995
Steel structures	AS 4100
Concrete structures	AS 3600

Maintenance

Guide to maintenance and supervision of insulating oils in service	AS 1883
Maintenance of electrical switchgear	AS 2467
In-service safety inspection and testing of electrical equipment	AS/NZS 3760
Guide to the installation, maintenance, testing and replacement of secondary batteries in buildings	
Part 1: Vented cells	
Part 2: Sealed cells	AS 2676.1 AS 2676.2

SECTION D—STANDARDS, CODES AND GUIDES RELATING TO PROTECTION AND EARTHING SYSTEMS

The standards and publications listed below (and any associated amendments) are relevant to this Code but do not necessarily represent all the standards that may need to be consulted in meeting the requirements of this Code.

Protection

All-or-nothing electrical relays (instantaneous and timing relays)	AS 2481
Voltage transformers for measurement and protection	AS 1243
Current transformers—Measurement and protection	AS 1675
Low-voltage switchgear and controlgear	
Part 1: General rules	AS/NZS 3947.1
Part 3: Switches, disconnectors, switch-disconnectors and fuse-combination units	AS/NZS 3947.3
Part 4: Contactors and motor-starters	
Part 4.1: Electromechanical contactors and motor-starters	AS/NZS 3947.4.1
Part 4.2: A.C. semiconductor motor controllers and starters	AS/NZS 3947.4.2
Part 5: Control circuit devices and switching elements	
Part 5.1: Electromechanical control circuit devices	AS/NZS 3947.5.1
Part 5.2: Proximity switches	AS/NZS 3947.5.2

Earthing

Switchgear assemblies and ancillary equipment for alternating voltages above 1 kV	AS 2067 Appendix C
Substation earthing guide	ESAA EG1
Guide to safety in substation grounding	IEEE 80
SAA wiring rules [Customer installations]	AS 3000 and
Electrical installations—Movable premises (including caravans) and their site installations [Customer installations]	AS 3001
Guidelines for the design and maintenance of overhead distribution and transmission lines-	
Stay wires	ESAA C(b)1 Section 13
Step and touch potentials	ESAA C(b)1 Section 12
Switchgear assemblies and ancillary equipment for alternating voltages above 1 kV	AS 2067 Appendix C2.6
ESAA - Australian Telecommunications Commission	
“Earth Potential Rise—Code of Practice” [ESAA, Earth Potential Rise—Code of Practice for the protection of personnel and equipment against earth potential rise caused by high voltage system faults]	
“Earth Return, High Voltage Power Lines” Code of Practice [ESAA, Conditions for single earth wire earth return—High voltage power lines]	

Maintenance

Switchgear assemblies and ancillary equipment for alternating voltages above 1 kV	AS 2067
SAA Wiring Rules [Electrical installations]	AS 3000
Guide to safety in substation grounding	IEEE 80
Guidelines for the design and maintenance of overhead distribution and transmission lines	ESAA C(b) 1
ESAA - Australian Telecommunications Commission	
"Earth Potential Rise" Code of Practice	
"Earth Return, High Voltage Power Lines" Code of Practice	

Testing

SAA Wiring Rules [Earthing]	AS 3000
Guide to safety in substation grounding [Earthing]	IEEE 80
Guidelines for the design and maintenance of overhead distribution and transmission lines [Earthing]	ESAA C(b) 1

SECTION E—STANDARDS, CODES AND GUIDES RELATING TO SAFE ELECTRICAL OPERATION AND WORK PRACTICES

The standards and publications listed below (and any associated amendments) are relevant to this Code but do not necessarily represent all the standards that may need to be consulted in meeting the requirements of this Code.

ESAA Model agreement for joint use of power poles between an electricity utility and communication cable owner	ESAA Publication
Guidelines for live line stick work	ESAA ND/NL - 01
Guidelines for live line glove and barrier work for voltages up to and including 33000 Volts	ESAA ND/NL - 02
Guidelines for live line bare hand work	ESAA ND/NL - 03
Guidelines for use of helicopters for live line work	ESAA ND/NL - 04
Guide to the manual reclosing of overhead lines	EC2
Guide to high voltage live line work	EC9
Guide to inspection procedures for plant and equipment	EC11
Guide to working on underground cables	EC12
Guide to safety equipment	EC14
Guide to working on overhead lines	ISSC15
Guide to safe electrical work procedure	EC16
Guide to working in electrical stations	EC17
Guide to the training of electricity supply workers	EC18
Guide to working on high voltage transmission lines	EC23
Guide to electricity workers' escape and rescue procedures	ISSC24
Elevating work platform purchasing specification and operating guide	ISSC25
Safe working in a confined space	AS 2865
Guide for working on cables and ancillary equipment under induced voltage conditions and transferred earth potentials	ESAA D(b)26
Health and safety at work—Principles and practices	AS 1470
Safeguarding of machinery—Part 1: General principles	AS 4024.1
Industrial fall-arrest systems and devices - Part 1: Safety belts and harnesses	AS 1891.1
Industrial safety belts and harnesses—Selection, use and maintenance	AS 2626
The selection, care and use of industrial safety helmets	AS 1800
Occupational protective footwear	
Part 1: Guide to Selection, Care and Use	AS 2210.1
Part 2: Specification	AS 2210.2
Cranes—Safe use	
Part 1: General requirements	AS 2550.1
Part 10: Elevating work platforms	AS 2550.10
Cranes (Including hoists and winches)	
Part 10: Elevating work platforms	AS 1418.10

DICTIONARY

- (1) “**Act**” means the *Utilities Act 2000*;
- (2) “**Australian Standard**” or “**AS/NZS**” or “**AS**” means a standard published by Standards Australia;
- (3) “**Business Day**” means a day, other than a Saturday, Sunday or public holiday in the **Territory**;
- (4) “**Chief Executive**” has the same meaning and functions as defined under the **Act**;
- (5) “**Electricity Distributor**” means a **Person** who holds a **Utility Services Licence** for the distribution of electricity;
- (6) “**Electricity Network**” has the same meaning as in the **Act**;
- (7) “**ICRC**” means the Independent Competition and Regulatory Commission established under section 5 of the *Independent Competition and Regulatory Commission Act 1997*;
- (8) “**Management of Electricity Network Assets Code**” means the **Management of Electricity Network Assets Code** approved by the **Minister** as a **Technical Code** under the **Act**;
- (9) “**Minister**” means the **Minister** responsible for administering Part 4 of the **Act**;
- (10) “**Person**” includes a natural person, a firm, an unincorporated association or a body corporate;
- (11) “**Safety Plan**” means a **Safety Plan** developed in accordance with the **Management of Electricity Network Assets Code**;
- (12) “**Serious electrical accident**” means an accident in which electricity is involved and as a consequence of which—
 - a person is injured or dies;
 - property is damaged; or
 - there is a fire;
- (13) “**Technical Code**” means a code approved or determined by the **Minister** under Part 5 of the **Act**;
- (14) “**Territory**” means the Australian Capital Territory;
- (15) “**Utility**” means a **Person** who holds a **Utility Services Licence**;
- (16) “**Utility Services Licence**” means a licence granted to a **Utility** by **ICRC** under the **Act**.

Electricity Service and Installation Rules Code

December 2000



AUSTRALIAN
CAPITAL TERRITORY

TABLE OF CONTENTS

1.	APPLICATION AND PURPOSE OF THIS CODE.....	1
1.1	Application.....	1
1.2	Purpose.....	1
2.	DICTIONARY	1
2.1	Dictionary Attached	1
3.	ELECTRICITY DISTRIBUTOR TO DEVELOP SERVICE AND INSTALLATION RULES.....	1
3.1	Electricity Distributor to Prepare or Adopt Service and Installation Rules.....	1
3.2	Service and Installation Rules to Comply with this Code	1
3.3	Electricity Distributor to Publish Service and Installation Rules	1
3.4	Compliance by Electrical Distributor with Service and Installation Rules.....	1
4.	GENERAL REQUIREMENTS FOR CONTENT OF THE SERVICE AND INSTALLATION RULES	1
4.1	Content of the Service and Installation Rules	1
5.	SPECIFIC CONTENTS OF THE SERVICE AND INSTALLATION RULES	2
5.1	Application of Service and Installation Rules	2
5.2	Modification of Requirements.....	2
5.3	Agreement to Pay Charges	2
5.4	Failure to Comply with Service and Installation Rules.....	2
5.5	Characteristics of Electricity Distributor’s Electricity Supply.....	3
5.6	System of Earthing	3
5.7	Fault Current	3
5.8	Electrical Installations to Comply with a Standard.....	3
5.9	Facilities Supplied by Customer for Connection to Electricity Network	3
5.10	Facilities Supplied by Customer for Service and Metering Equipment.....	4
5.11	Substation on Customer’s Premises	4
5.12	Number of Services Provided to Customer by Electricity Distributor.....	4
5.13	Sealing Parts of a Customer’s Electrical Installation	5
5.14	Customer to Label Parts of Electrical Installation.....	5
5.15	Charges for Service Equipment.....	5
5.16	Number of Phases of Customer’s Electricity Supply and Balancing of Load	6
5.17	Interference with Electricity Supply to Other Customers	6
5.18	Power Factor of Customers’ Electrical Installations	7
5.19	Alternative Power Supply Installed by Customer.....	7
5.20	Provision of High Voltage Power Supply to Customer by Electricity Distributor....	7
5.21	Provision of Temporary Power Supply to Customer by Electricity Distributor	7
5.22	Common Trenching.....	7

5.23 Other Requirements	7
6. COMPLIANCE.....	7
6.1 Content of Standard Customer Contract	7
DICTIONARY.....	9

1. APPLICATION AND PURPOSE OF THIS CODE

1.1 Application

This Code applies to **Electricity Distributors**.

1.2 Purpose

The purpose of this Code is to require **Electricity Distributors** to develop **Service and Installation Rules** that set out the requirements and associated obligations and procedures for the safe, reliable and efficient connection of **Electrical Installations** to an **Electricity Network**.

2. DICTIONARY

2.1 Dictionary Attached

The dictionary at the end of this **Electricity Service and Installation Rules Code** is part of this Code.

3. ELECTRICITY DISTRIBUTOR TO DEVELOP SERVICE AND INSTALLATION RULES

3.1 Electricity Distributor to Prepare or Adopt Service and Installation Rules

An **Electricity Distributor** must, as soon as possible following the grant of its **Utility Services Licence**:

- (1) prepare and adopt its own **Service and Installation Rules**; or
- (2) adopt **Service and Installation Rules** developed by another **Person**.

3.2 Service and Installation Rules to Comply with this Code

Service and Installation Rules must comply with the terms of this Code.

3.3 Electricity Distributor to Publish Service and Installation Rules

An **Electricity Distributor** must, as soon as possible after adopting **Service and Installation Rules**:

- (1) publish the **Service and Installation Rules**; and
- (2) provide a copy of the **Service and Installation Rules** to the **Chief Executive**.

3.4 Compliance by Electrical Distributor with Service and Installation Rules

An **Electricity Distributor** must comply with all the terms of any **Service and Installation Rules** it adopts.

4. GENERAL REQUIREMENTS FOR CONTENT OF THE SERVICE AND INSTALLATION RULES

4.1 Content of the Service and Installation Rules

Service and Installation Rules must:

- (1) seek to preserve the security, reliability and the safety of the **Electricity Network**, while minimising interference to the **Customers** of the **Electricity Distributor**;
- (2) seek to adopt standard industry practices; and
- (3) specify requirements for the **Electricity Distributor's** standard method of connection to an **Electricity Network** and specify, for alternative methods of connection:
 - (a) the process by which a **Person** may propose an alternative method of connection;
 - (b) who decides whether or not the proposal is acceptable;
 - (c) the time allowed for the decision; and
 - (d) an independent review process for any disputes arising out of the alternative proposals.

5. SPECIFIC CONTENTS OF THE SERVICE AND INSTALLATION RULES

5.1 Application of Service and Installation Rules

Service and Installation Rules may state that provisions of the **Service and Installation Rules** apply to a new **Electrical Installation**, an addition or alteration to an **Electrical Installation** or to the **Electrical Installation** of a new **Customer**.

5.2 Modification of Requirements

Service and Installation Rules may state that, if a provision of the **Service and Installation Rules** of an **Electricity Distributor** allows the **Electricity Distributor** to waive or modify a part of the **Service and Installation Rules**, the waiver must be made, or modification must be approved, in writing, by the **Electricity Distributor**.

5.3 Agreement to Pay Charges

Service and Installation Rules may require a **Customer** who has failed to make a payment which is required by the **Service and Installation Rules** to an **Electricity Distributor** to sign an agreement in a form acceptable to the **Electricity Distributor** before work begins.

5.4 Failure to Comply with Service and Installation Rules

- (1) **Service and Installation Rules** may allow an **Electricity Distributor** to refuse to supply a **Customer** with electricity or to disconnect the supply of electricity to the **Customer's Premises** if the **Customer** fails to comply with the **Electricity Distributor's Service and Installation Rules**.
- (2) If the **Electricity Distributor** disconnects the supply of electricity to a **Customer's Premises** under subclause 5.4 (1), the **Service and Installation Rules** may allow the **Electricity Distributor** to not reconnect the **Premises** until:

- (a) the **Customer** has paid the **Electricity Distributor** a sum that represents the **Electricity Distributor's** reasonable expenses incurred due to the disconnection; and
- (b) the **Customer** has complied with the **Service and Installation Rules**.

5.5 Characteristics of Electricity Distributor's Electricity Supply

- (1) **Service and Installation Rules** may describe the characteristics of the **Electricity Distributor's** electricity supply.
- (2) **Service and Installation Rules** must state that the **Electricity Distributor** will provide an electricity supply at a standard nominal voltage consistent with **Australian Standard 2926** or **Australian Standard 60038**.
- (3) **Service and Installation Rules** may state that the **Electricity Distributor** may agree with **Customers** to provide an electricity supply at a voltage and frequency agreed between the **Electricity Distributor** and the **Customer**.

5.6 System of Earthing

Service and Installation Rules may require **Customer's Electrical Installations** to comply with the multiple earth neutral system of earthing or another system consistent with **Australian Standard 3000**.

5.7 Fault Current

- (1) **Service and Installation Rules** must state the maximum current from the **Electricity Network** that **Customers' Electrical Installations** must be designed to withstand, without damage, under fault conditions.
- (2) **Service and Installation Rules** must state the circumstances in which the maximum fault current will differ from the stated maximum and, if it differs, require the **Electricity Distributor** to inform the **Customer**.

5.8 Electrical Installations to Comply with a Standard

Service and Installation Rules may allow the **Electricity Distributor** to refuse to connect an **Electrical Installation** to the **Electricity Distributor's Electricity Network** if the installation has not been tested and found to be in accordance with **Australian Standard 3000**.

5.9 Facilities Supplied by Customer for Connection to Electricity Network

- (1) **Service and Installation Rules** may require a **Customer** to provide and maintain, at the **Customer's** expense, facilities for the connection of the **Customer's Electrical Installation** to the **Electricity Distributor's Electricity Network**.
- (2) Subject to subclause 4.1 (3), **Service and Installation Rules** may specify the nature and location of the facilities mentioned in subclause 5.9 (1).

5.10 Facilities Supplied by Customer for Service and Metering Equipment

- (1) **Service and Installation Rules** may require a **Customer** to provide and maintain on the **Customer's Premises**, at the **Customer's** expense, space, housing, mounting and connection facilities for **Service Equipment** and **Metering Equipment** for the benefit of an **Electricity Distributor** or an **Electricity Supplier**.
- (2) **Service and Installation Rules** may specify the nature and location of the facilities mentioned in subclause 5.10 (1).
- (3) The nature and location of the facilities specified by the **Service and Installation Rules** may vary according to the use or proposed use of the **Customer's Premises**, the nature of the electrical equipment installed or proposed to be installed in those **Premises**, and the kind of connection to be provided.

5.11 Substation on Customer's Premises

- (1) **Service and Installation Rules** must state that the method of supply to large or isolated **Electrical Installations** may be determined by negotiations between an **Electricity Distributor** and the **Customer**.
- (2) If maximum demand of a **Customer's Electrical Installation** is likely to exceed 250 kVA or the **Customer's Electrical Installation** is at an isolated location, the **Service and Installation Rules** may require the **Customer** to inquire of the **Electricity Distributor** whether a substation will be required on the **Customer's Premises**.
- (3) **Service and Installation Rules** may require a **Customer** to provide on the **Customer's Premises**, free of charge, space and an enclosure for a substation, if the supply of electricity required by the **Customer's Premises** is considered by the **Electricity Distributor** to require it.
- (4) **Service and Installation Rules** may allow the **Electricity Distributor** to decide the suitability of the location and nature of the facilities mentioned in subclause 5.11 (3).
- (5) **Service and Installation Rules** may require a **Customer** to meet the expense of extending the **Electricity Distributor's** high voltage mains to supply a substation established on the **Customer's Premises**.
- (6) If an **Electricity Distributor** has installed a substation on a **Customer's Premises**, the **Service and Installation Rules** may allow the **Electricity Distributor** to use the equipment in that substation to supply another **Customer**, providing the requirements of the **Customer** on whose **Premises** the substation is located are met first.

5.12 Number of Services Provided to Customer by Electricity Distributor

- (1) **Service and Installation Rules** may limit the number of services the **Electricity Distributor** will provide to a **Customer** to one service for any one building or one group of buildings on the same **Premises**.
- (2) Despite subclause 5.12 (1), the **Electricity Distributor** may:

- (a) require more than one service to large **Premises** if the **Electricity Distributor** considers it necessary; or
 - (b) agree, at a **Customer's** request, to provide, at the **Customer's** expense, an additional service to the **Customer's Premises**.
- (3) **Service and Installation Rules** may state that, if the **Electricity Distributor** provides an additional service to **Premises**:
- (a) each service must, unless the **Electricity Distributor** agrees otherwise, supply a separate and clearly defined portion of the **Premises**; and
 - (b) any one service must, unless the additional service is intended to supply specific electrical equipment, supply the whole of the **Electrical Installation** in a separate portion of the premises.

5.13 Sealing Parts of a Customer's Electrical Installation

Service and Installation Rules may require a **Customer** to make provision for the **Electricity Distributor** to fix seals to parts of the **Customer's Electrical Installation** if the **Electricity Distributor** considers that the seals are necessary:

- (1) to prevent obstruction or diversion of the electricity supply;
- (2) to avoid interference with the electricity supply to other **Customers**;
- (3) in relation to the control and metering of the electricity supply; or
- (4) in relation to an agreement with the **Customer**.

5.14 Customer to Label Parts of Electrical Installation

- (1) If a **Customer's Premises** are divided into subtenancies and a separate electricity supply is given to an occupancy, **Service and Installation Rules** may require the **Customer** to identify an occupancy that has a separate supply and mark the distribution board with the same identification mark to identify the supply equipment for that occupancy.
- (2) If a **Customer's Premises** consist of a number of separate areas, **Service and Installation Rules** may require the **Customer** to mark or otherwise identify each area and mark the meter panel with the same identification mark to identify the meter and service equipment for that area.
- (3) If a **Customer's Premises** are supplied from more than one service, **Service and Installation Rules** may require the **Customer** to label each service position, mark the main switchboard associated with that area with the same identification mark to identify the part of the **Electrical Installation** supplied and indicate the location and conditions of operation of any alternative source of supply to the **Electrical Installation**.

5.15 Charges for Service Equipment

Service and Installation Rules may require a **Customer** to pay the **Electricity Distributor** part or all of the additional expenses incurred by the **Electricity Distributor** in relation to the installation of **Service Equipment** if:

- (1) the length of a service line exceeds a minimum length specified by the **Electricity Distributor**;
- (2) the service line is connected to the **Customer's Electrical Installation** at a point other than that selected by the **Electrical Distributor** and the difference increases the cost to the **Electrical Distributor** of making the connection;
- (3) the number of phases of low voltage electricity supplied to a **Customer's Electrical Installation**, or a separately metered portion of a **Customer's Electrical Installation**, is greater than the number specified by the **Electricity Distributor** for the kind of **Electrical Installation**;
- (4) the point of attachment of the **Electricity Distributor's** service line to the **Customer's** building or structure is relocated because of alterations to the building or structure;
- (5) it is necessary for the **Electricity Distributor** to joint the **Consumer's Mains** or an underground service line on the **Customer's Premises**; or
- (6) the service provided to the **Customer** is a temporary supply or an additional service.

5.16 Number of Phases of Customer's Electricity Supply and Balancing of Load

Service and Installation Rules may:

- (1) specify the number of phases of low voltage electricity that the **Electricity Distributor** will supply to a **Customer's Electrical Installation** or a separately metered portion of a **Customer's Electrical Installation**;
- (2) state that the **Electricity Distributor** may agree to provide additional phases at the **Customer's** expense; and
- (3) if a **Customer's Electrical Installation** or a separately metered portion of a **Customer's Electrical Installation** is supplied from more than one phase, set requirements for the balancing of the load over them.

5.17 Interference with Electricity Supply to Other Customers

- (1) **Service and Installation Rules** may set requirements for the design, installation or use of a motor installation or associated starting device or another **Electrical Article** that is part of, or connected to, a **Customer's Electrical Installation** in order to prevent interference with the supply of electricity to other **Customers** of the **Electricity Distributor**.
- (2) Any requirements of the **Service and Installation Rules** to prevent interference with the supply of electricity to other **Customers** may include provisions for special consideration of specified kinds of electrical equipment.
- (3) Any requirements of the **Service and Installation Rules** in relation to limits on harmonic voltage distortion or voltage fluctuations in the **Electricity Network** of the **Electricity Distributor** caused by a **Customer's Electrical Installation** must be consistent with the requirements of **Australian Standard 2279** and **Australian Standard 61000**, as appropriate.

5.18 Power Factor of Customers' Electrical Installations

Service and Installation Rules may set requirements for the minimum power factor of a **Customer's Electrical Installation** if the **Electricity Distributor** considers that the electricity supply taken by the **Customer** is, or would not be, efficiently utilised or the supply to another **Customer** would, or might, be adversely affected.

5.19 Alternative Power Supply Installed by Customer

Service and Installation Rules may, if a **Customer** installs equipment to provide an alternative electricity supply during an interruption to the **Electricity Distributor's** electricity supply, set requirements to ensure the safe parallel operation of the equipment and the **Electricity Distributor's Electricity Network**.

5.20 Provision of High Voltage Power Supply to Customer by Electricity Distributor

Service and Installation Rules may set requirements for the design, construction, installation and use of a **Customer's** high voltage electrical equipment when the **Electricity Distributor** is to provide a high voltage electricity supply to the **Customer**.

5.21 Provision of Temporary Power Supply to Customer by Electricity Distributor

- (1) **Service and Installation Rules** may set requirements for providing a temporary electricity supply to a **Customer**.
- (2) Any requirements of the **Service and Installation Rules** in relation to a temporary supply may include a statement that the **Electricity Distributor** will not provide a temporary electricity supply unless permanent supply is available.
- (3) Any requirements of the **Service and Installation Rules** in relation to a temporary supply may include a requirement to comply with **Australian Standard 3002, Australian Standard 3005 or AS 3012**, where appropriate.

5.22 Common Trenching

If no common trenching agreement is in place, **Service and Installation Rules** may authorise, subject to conditions set by the **Service and Installation Rules**, the use for other services of a trench excavated for the **Electricity Distributor's** service cable.

5.23 Other Requirements

Service and Installation Rules may contain other provisions consistent with clause 4.1.

6. COMPLIANCE

6.1 Content of Standard Customer Contract

An **Electricity Distributor** may include in its **Standard Customer Contract** provisions that require an **Electrical Installation** to comply with its **Service and Installation Rules** prior to the connection of that **Electrical Installation** to its **Electricity Network**.

DICTIONARY

- (1) “**Accredited Service Provider**” in relation to any **Utility Service** means a person who has been accredited to perform that **Utility Service** in accordance with the **Act**;
- (2) “**Act**” means the *Utilities Act 2000*;
- (3) “**Australian Standard**” or “**AS/NZS**” or “**AS**” means a standard published by Standards Australia;
- (4) “**Consumer’s Mains**” means those conductors between the **Point of Supply** and the main switchboard;
- (5) “**Customer**” has the same meaning as in the **Act**;
- (6) “**Electrical Article**” means:
 - a wire, cable, fitting, meter, insulator, switchboard, or apparatus designed or intended for use in an **Electrical Installation**; and
 - an appliance, fitting or apparatus operated by electricity and the cable and other things required for its connection to an **Electrical Installation**;
- (7) “**Electrical Installation**” means the electrical wiring and associated equipment used to convey and to control the conveyance of electricity within **Customer’s Premises**, but does not include any electrical equipment connected to or extending or situated beyond an electrical outlet socket;
- (8) “**Electricity Distributor**” means a **Person** who holds a **Utility Services Licence** for the distribution of electricity;
- (9) “**Electricity Network**” has the same meaning as in the **Act**;
- (10) “**Electricity Service and Installation Rules Code**” means the **Electricity Service and Installation Rules Code** approved by the **Minister** as a **Technical Code** under the **Act**;
- (11) “**ICRC**” means the Independent Competition and Regulatory Commission established under section 5 of the *Independent Competition and Regulatory Commission Act 1997*;
- (12) “**Meter**” means a device or other apparatus used for measuring and recording the consumption of electricity;
- (13) “**Metering Equipment**” means equipment necessary for measuring and recording the consumption of electricity and includes the **Meter** and may also include current transformers, potential transformers, test links, potential fusers, etc.
- (14) “**Minister**” means the **Minister** responsible for administering Part 4 of the **Act**;
- (15) “**Person**” includes a natural person, a firm, an unincorporated association or a body corporate;
- (16) “**Point of Supply**” means the junction of the conductors of the **Electricity Distributor’s Electricity Network** with the **Customer’s Electrical Installation**;
- (17) “**Premises**” has the same meaning as in the **Act**;

- (18) **“Service and Installation Rules”** means **Service and Installation Rules** adopted by an **Electricity Distributor** in accordance with the **Electricity Service and Installation Rules Code**;
- (19) **“Service Equipment”** means all equipment owned by an **Electricity Distributor** or an **Accredited Service Provider**, including equipment installed inside a **Customer’s Premises**;
- (20) **“Standard Customer Contract”** means a contract that is a **Standard Customer Contract** for the purposes of Part 6 of the **Act**;
- (21) **“Technical Code”** means a code approved or determined by the **Minister** under Part 5 of the **Act**;
- (22) **“Utility”** means a **Person** who holds a **Utility Services Licence**;
- (23) **“Utility Service”** has the same meaning as in the **Act**;
- (24) **“Utility Services Licence”** means a licence granted to a **Utility** by **ICRC** under the **Act**.

Water Supply and Sewerage Service Standards Code

December 2000



AUSTRALIAN
CAPITAL TERRITORY

Authorised by the ACT Parliamentary Counsel—also accessible at www.legislation.act.gov.au

TABLE OF CONTENTS

1.	APPLICATION AND PURPOSE	1
1.1	Application	1
1.2	Purpose	1
2.	DICTIONARY.....	1
2.1	Dictionary Attached	1
3.	EFFECT OF CODE.....	1
3.1	Code Not to be Taken to Limit Alternative Standards	1
4.	WATER SUPPLY	1
4.1	Customer Water Supply	1
4.2	Water Supply Constraints.....	1
5.	WATER QUALITY	2
5.1	Water Quality and Customers	2
6.	WATER QUALITY COMPLAINTS	2
6.1	Response to Complaints	2
7.	WATER QUANTITIES	2
7.1	Quantity Available for Domestic Customers	2
7.2	Water Quantity and Non-Domestic Customers.....	2
7.3	Quantity and Restrictions to Supply	3
8.	RECTIFYING A SUB-STANDARD SUPPLY	3
8.1	Testing of Water Supply	3
8.2	Costs of Testing: Water Utility to Pay	3
8.3	Costs of Testing: Customer to Pay	3
8.4	Rectification of Substantiated Complaint.....	3
9.	WATER AVAILABILITY	3
10.	WATER NETWORK MAINTENANCE.....	4
10.1	Minimum Maintenance Standards for Domestic and Non-Domestic Water Supplies	4
10.2	Unplanned Maintenance and Notification of Customers	4
10.3	Emergency Supplies of Drinking Water	4
11.	FIRE HYDRANTS.....	4
11.1	Water Utility Obligations	4
12.	SEWERAGE NETWORK	4
12.1	Customer's Reasonable Needs	4
12.2	Sewerage Service Constraints	4
13.	SEWERAGE SYSTEM AVAILABILITY	5
14.	RECTIFYING A SUB-STANDARD SUPPLY	5

14.1	Rectifying Sub-Standard Services	5
14.2	Responses to Customer Notification of Problems	5
15.	SEWERAGE MAINTENANCE	5
15.1	Minimum Maintenance Standards for Domestic Services	5
15.2	Cost of Investigative Work at Customer's Premises.....	5
15.3	Sewage Overflows.....	5
16.	MATERIAL TO BE DISCHARGED INTO THE SEWERAGE NETWORK.....	6
16.1	Acceptable Waste.....	6
16.2	Liquid Waste Acceptance Policy	6
16.3	Liquid Waste Acceptance and Non-Domestic Customers	6
	DICTIONARY.....	8

1. APPLICATION AND PURPOSE

1.1 Application

This Code applies to:

- (1) water supplied within the urban area identified by the **Territory Plan**; and
- (2) **Water Utilities** and **Sewerage Utilities**.

1.2 Purpose

The purpose of this Code is to prescribe minimum standards:

- (1) for quality and reliability of water supply distributed through **Water Networks**; and
- (2) for the provision of **Sewerage Services**, including the removal of sewage from **Customer's Premises** through **Sewerage Networks**.

2. DICTIONARY

2.1 Dictionary Attached

The dictionary at the end of this **Water Supply and Sewerage Service Standards Code** is part of this Code.

3. EFFECT OF CODE

3.1 Code Not to be Taken to Limit Alternative Standards

Nothing in this Code is to be taken to prevent:

- (1) a **Water Utility** agreeing with a **Customer**, in a **Negotiated Customer Contract**, to water supply standards otherwise than as prescribed under this Code; and
- (2) a **Sewerage Utility** agreeing with a **Customer**, in a **Negotiated Customer Contract**, to **Sewerage Service** standards other than as prescribed under this Code.

4. WATER SUPPLY

4.1 Customer Water Supply

A **Water Utility** is required to ensure that the **Customer** has a water supply that meets the **Customer's** reasonable needs, in accordance with the **Standard Customer Contract**, subject to clause 4.2.

4.2 Water Supply Constraints

A **Water Utility's** water supply obligations under this Code do not apply in the case of events or circumstances beyond the control of the **Water Utility** that may prevent the **Water Utility** from complying with these obligations.

5. WATER QUALITY

5.1 Water Quality and Customers

In supplying water to **Customers**, a **Water Utility**:

- (1) must, if supplying them with potable water, comply with the requirements of the **Drinking Water Quality Code of Practice 2000**; and
- (2) when supplying them with all other types of water, may agree with the **Customer** on different supply standards from those prescribed by this Code.

6. WATER QUALITY COMPLAINTS

6.1 Response to Complaints

A **Water Utility**:

- (1) must respond to **Customers'** water quality complaints within 4 hours in an average of 95% of cases;
- (2) must take all reasonable and practical steps required to minimise the duration and intensity of the incident reported;
- (3) must, if the complaint cannot be remedied within 24 hours, advise the **Customer** in writing and within 5 **Business Days** of the complaint being received, of the known cause of the problem and what is being done to rectify it; and
- (4) should, where there are widespread complaints, utilise to the extent that it considers appropriate, the local news media to communicate with complainants.

7. WATER QUANTITIES

7.1 Quantity Available for Domestic Customers

A **Water Utility** must take all reasonable steps to ensure that, during normal operating conditions and subject to any alternative agreement with **Customers**, water supply connections to urban **Premises** provide:

- (1) a pressure of not less than 10 meters (100kPa) static head at the highest ground level point on the **Premises**;
- (2) a pressure of not more than 120 meters static head. Pressures are to be measured at the water **Meter** or at the first tap after the **Meter** in no flow conditions; and
- (3) flow rates not less than the rates specified in Schedule 1.

7.2 Water Quantity and Non-Domestic Customers

Subject to any other quantity negotiated between a **Water Utility** and a **Non-Domestic Customer**, the domestic water supply specified at clause 7.1 shall be the minimum quantity to be made available by a **Water Utility**.

7.3 Quantity and Restrictions to Supply

Where a **Water Utility** restricts the supply of water to a **Customer's Premises**, the flow rate must not be less than 2 litres per minute. The flow is to be measured at the tap nearest the **Meter**.

8. RECTIFYING A SUB-STANDARD SUPPLY

8.1 Testing of Water Supply

- (1) a **Customer** may request either a **Water Utility** or a **Person** with **NATA** accreditation to test whether the **Water Utility** is providing a water quantity as specified in clause 7.1 of this Code, or water quality in accordance with the **Drinking Water Quality Code of Practice 2000**; and
- (2) water tested under clause 8.1 (1) must be tested using water samples taken by the **Water Utility** or a **Person** with **NATA** accreditation.

8.2 Costs of Testing: Water Utility to Pay

A **Water Utility** must pay the **Costs** of testing under clause 8.1 if the test shows that the **Water Utility** has not satisfied the water quantity requirements of this Code or the water quality requirements of the **Drinking Water Quality Code of Practice 2000**.

8.3 Costs of Testing: Customer to Pay

If the test under clause 8.1 shows that a **Water Utility** has satisfied the water quantity requirements of this Code or the water quality requirements of the **Drinking Water Quality Code of Practice 2000**, the **Customer** must pay the **Cost** of the test.

8.4 Rectification of Substantiated Complaint

If a test conducted by a **Water Utility** or a **Person** with **NATA** accreditation demonstrates the **Water Utility** is not meeting its obligations under this Code or the **Drinking Water Quality Code of Practice 2000**, the **Water Utility** must rectify the fault as soon as possible or within a time frame agreed with the **Customer**.

9. WATER AVAILABILITY

A **Water Utility** must ensure that water supply from the **Water Network** is available 24 hours a day, every day of the year, subject to any disconnections of services, interruptions to supply, or restrictions to supply. These disconnections, interruptions or restrictions may occur in accordance with the **Consumer Protection Code** or may be due to events or conditions outside the control of the **Water Utility** and prevent compliance with this Code.

10. WATER NETWORK MAINTENANCE

10.1 Minimum Maintenance Standards for Domestic and Non-Domestic Water Supplies

When a **Water Utility** becomes aware of a burst or leak to the **Water Network**, the **Water Utility** must respond to that burst or leak in accordance with the relevant performance standard in the **Consumer Protection Code**.

10.2 Unplanned Maintenance and Notification of Customers

A **Water Utility** must make every reasonable effort, in accordance with the requirements of the **Consumer Protection Code**, to inform **Customers** before supply is removed due to un-planned maintenance of the **Water Network**.

10.3 Emergency Supplies of Drinking Water

A **Water Utility** must make emergency supplies of drinking water of reasonable quantity and quality available to a **Customer** if the **Customer** has been without drinking water for more than 12 hours.

11. FIRE HYDRANTS

11.1 Water Utility Obligations

A **Water Utility** must:

- (1) ensure that hydrants are installed on its **Watermains** at such convenient distances and at such places as negotiated with the ACT Fire Brigade for the ready supply of water to extinguish fires;
- (2) maintain the hydrants in ready working order in accordance with any agreement reached with the ACT Fire Brigade; and
- (3) keep the **Watermains** full and pressurised at all times unless prevented from doing so by drought, accident, planned or unplanned maintenance or repairs required to the **Watermains** on which the hydrant is located.

12. SEWERAGE NETWORK

12.1 Customer's Reasonable Needs

If a **Customer's Premises** are connected to the **Sewerage Utility's Sewerage Network**, the **Sewerage Utility** must supply the **Customer** with **Sewerage Services** to meet the **Customer's** reasonable needs, in accordance with the **Standard Customer Contract**.

12.2 Sewerage Service Constraints

A **Sewerage Utility's Sewerage Service** obligations under this Code do not apply in the case of events or circumstances beyond the control of the **Sewerage Utility** that may prevent the **Sewerage Utility** from complying with these obligations.

13. SEWERAGE SYSTEM AVAILABILITY

The **Sewerage Network** should be available 24 hours a day, every day of the year, subject to service interruptions and disconnections which may occur in accordance with the **Consumer Protection Code** or may be due to events or conditions outside the control of the **Sewerage Utility**.

14. RECTIFYING A SUB-STANDARD SUPPLY

14.1 Rectifying Sub-Standard Services

If the **Sewerage Utility** is not providing a **Customer** with a **Sewerage Service** that meets its obligations under clauses 12 and 13 of this Code, the **Sewerage Utility** must rectify the fault as soon as possible or within a timeframe agreed with the **Customer**.

14.2 Responses to Customer Notification of Problems

Notwithstanding clause 14.1, if a **Customer** notifies a **Utility** of a problem or concern with the **Sewerage Utility's Sewerage Network** that affects the **Customer**, the **Utility** must:

- (1) respond as soon as practicable and within 6 hours if the notification relates to a problem which is likely to affect public health or is causing, or has the potential to cause, substantial damage or harm to the **Customer** or their property;
- (2) respond within 48 hours in all other cases.

15. SEWERAGE MAINTENANCE

15.1 Minimum Maintenance Standards for Domestic Services

A **Sewerage Utility** must provide **Sewerage Services** to its **Customers** in accordance with the relevant performance standards of the **Consumer Protection Code**.

15.2 Cost of Investigative Work at Customer's Premises

- (1) If a **Customer** has had to engage a licensed drainer to investigate the cause of a sewer blockage and the drainer provides objective evidence that the blockage is in the **Sewerage Utility's Sewerage Network**, the **Sewerage Utility** must reimburse the **Customer** for their reasonable **Costs** incurred. Reasonable **Costs** are to be based on the **Sewerage Utility's** standard schedule of rates for the work carried out by the drainer.
- (2) The **Utility** is not liable for these **Costs** if it can be demonstrated that the blockage was caused by waste not permitted under the **Customer's Customer Contract**.

15.3 Sewage Overflows

If a sewage overflow is in the **Customer's Premises** and has been caused by a problem within the **Sewerage Utility's Sewerage Network**, the **Sewerage**

Utility must assist the **Customer** to minimise damage and to clean up the sewage from the affected areas, without prejudice, at the **Sewerage Utility's** expense.

16. MATERIAL TO BE DISCHARGED INTO THE SEWERAGE NETWORK

16.1 Acceptable Waste

All **Domestic Sewage** and wastewater arising from **Domestic Water** uses will be accepted into the **Sewerage Utility's Sewerage Network**.

16.2 Liquid Waste Acceptance Policy

The **Sewerage Utility** shall develop a **Liquid Waste** Acceptance Policy which defines which **Liquid Waste**, other than **Domestic Sewage**, can be safely discharged into the **Sewerage Utility's Sewerage Network**.

16.3 Liquid Waste Acceptance and Non-Domestic Customers

The **Sewerage Utility** may enter into a **Negotiated Customer Contract** with **Customers** wishing to discharge waste other than **Domestic Waste**, as defined by the **Sewerage Utility's Liquid Waste** Acceptance Policy.

SCHEDULE 1: OPERATIONAL FLOW RATES

Diameter of the property service pipe (mm)	20	25	32	40	50
Minimum flow rate in litres per minute	20	35	60	90	160

DICTIONARY

- (1) “**Act**” means the *Utilities Act 2000*;
- (2) “**Business Day**” means a day, other than a Saturday, Sunday or public holiday in the **Territory**;
- (3) “**Consumer Protection Code**” means the **Consumer Protection Code** approved by **ICRC** as an **Industry Code** under Part 4 of the **Act**;
- (4) “**Cost**” includes any cost, charge, expense, outgoing, payment or other expenditure of any nature whatever, including where appropriate all reasonable and proper legal fees;
- (5) “**Customer**” has the same meaning as defined under the **Act**;
- (6) “**Domestic Sewage**” has the same meaning as in the **Sewerage Utility’s** published guidelines;
- (7) “**Domestic Water**” means the use of water for normal human activities within the residential home. These activities typically include, but are not limited to:
- drinking water;
 - cooking;
 - showering /bathing;
 - dishwashing;
 - clothes/laundry washing;
 - toiletry and household cleaning uses;
 - reasonable irrigation of a limited garden; and
 - non-commercial vehicle washing.
- It does not include activities such as using water for the disposal of pesticides, pharmaceuticals, paint and hydro-carbon products.
- (8) “**Drinking Water Quality Code of Practice 2000**” means the **Drinking Water Quality Code of Practice 2000** made under the *Public Health Act 1997*;
- (9) “**Industry Code**” means a code approved or determined by **ICRC** under Part 4 of the **Act**;
- (10) “**ICRC**” means the Independent Competition and Regulatory Commission established under section 5 of the *Independent Competition and Regulatory Commission Act 1987 (ACT)*;
- (11) “**Liquid Waste**” means waste other than **Domestic Sewage**;
- (12) “**Meter**” means a **Meter** or other apparatus for the measurement of water including any pipes and fittings ancillary to the meter or apparatus;
- (13) “**NATA**” is the National Association of Testing Authorities;

- (14) **“Negotiated Customer Contract”** means a contract that is a **Negotiated Customer Contract** for the purposes of Part 6 of the **Act**;
- (15) **“Non-Domestic Customer”** means a **Customer** who uses **Water Services** and **Sewerage Services** for purposes other than domestic purposes;
- (16) **“Person”** includes a natural person, a firm, an unincorporated association or body corporate;
- (17) **“Premises”** has the same meaning as in the **Act**;
- (18) **“Sewerage Network”** has the same meaning and functions as defined under the **Act**;
- (19) **“Sewerage Services”** means those services as defined in the **Act**;
- (20) **“Sewerage Utility”** has the same meaning and functions as defined under the **Act**;
- (21) **“Standard Customer Contract”** has the same meaning and functions as defined under the **Act**;
- (22) **“Territory”** means the Australian Capital Territory;
- (23) **“Territory Plan”** means the **Territory Plan** as in effect from time to time under the *Land (Planning and Environment) Act 1991*;
- (24) **“Utility”** has the same meaning and functions as defined under the **Act**;
- (25) **“Watermain”** means a **Watermain** forming part of a **Water Utility's Water Network** as defined in the **Act**;
- (26) **“Water Network”** has the same meaning and functions as defined under the **Act**;
- (27) **“Water Services”** means those services as defined in the **Act**;
- (28) **“Water Supply and Sewerage Standards Code”** means the **Water Supply and Sewerage Standards Code** approved by the **Minister** as a **Technical Code** under the **Act**;
- (29) **“Water Utility”** is a **Utility** licensed under the **Act** to provide **Water Services**.

Water Metering Code

December 2000



AUSTRALIAN
CAPITAL TERRITORY

Authorised by the ACT Parliamentary Counsel—also accessible at www.legislation.act.gov.au

TABLE OF CONTENTS

1.	APPLICATION AND PURPOSE OF THIS CODE	1
1.1	Application	1
1.2	Purpose	1
2.	DICTIONARY	1
2.1	Dictionary Attached.....	1
3.	EFFECT OF CODE	1
3.1	Code Not to be Taken to Limit Water Utilities and Customers	1
4.	WATER UTILITY RIGHTS WITH RESPECT TO METERING EQUIPMENT	1
4.1	Water Utility May Require Installation of Metering Equipment.....	1
5.	SUPPLY OF METERING EQUIPMENT	1
5.1	Each Water Utility to Supply Metering Equipment	1
5.2	Standard of Metering Equipment	1
5.3	New Metering Equipment	2
5.4	Non-Compliance with Technical Standards.....	2
5.5	Standard Metering Equipment	2
5.6	Meter Protection Cover or Structure	2
6.	COST OF SUPPLY OF METERING EQUIPMENT	3
6.1	Cost of Supply of Standard Metering Equipment.....	3
6.2	Cost of Supply of Non-Standard Metering Equipment.....	3
6.3	Periodic Replacement of Meters.....	3
6.4	Numbering of Meters	3
6.5	Issuing of Meters	4
7.	OWNERSHIP OF METERING EQUIPMENT	4
7.1	Ownership of Metering Equipment	4
8.	INSTALLATION OF METERING EQUIPMENT	4
8.1	Provisions of Standard Customer Contracts.....	4
9.	MAINTENANCE AND REPLACEMENT OF METERING EQUIPMENT	4
9.1	Unauthorised Interference	4
9.2	Customers Must Notify Water Utility of Damage.....	5
9.3	Water Utility to Repair Metering Equipment.....	5
9.4	Cost of Repairs: Customers.....	5
9.5	Cost of Repairs: Utility	5
9.6	Removal of Meters.....	5
9.7	Removal of Meters: Monitoring System	5
9.8	Removal of Meter Without Authority	5

10. ACCESS TO METERING EQUIPMENT	6
10.1 Customer’s Obligations and Cost of Access.....	6
11. READING METERS.....	6
11.1 Frequency of Meter Readings	6
11.2 Check Readings at Request of Customer	6
12. METER TESTING	7
12.1 Water Utility May Test Metering Equipment.....	7
12.2 Customer May Request Test	7
12.3 When Metering Equipment is Defective.....	7
12.4 Technical Standards	7
13. ADJUSTMENTS TO CUSTOMER ACCOUNTS	7
13.1 Mandatory Standard Customer Contract Provisions.....	7
13.2 Optional Standard Customer Contract Provisions	8
14. METERING INFORMATION.....	8
14.1 Mandatory Standard Customer Contract Provisions.....	8
14.2 Optional Standard Water Connection Arrangement Provisions.....	9
15. DISPUTES	9
DICTIONARY	10

1. APPLICATION AND PURPOSE OF THIS CODE

1.1 Application

This Code applies to **Water Utilities**.

1.2 Purpose

The purpose of this Code is to set out those matters that relate to water metering.

2. DICTIONARY

2.1 Dictionary Attached

The dictionary at the end of this **Water Metering Code** is part of this Code.

3. EFFECT OF CODE

3.1 Code Not to be Taken to Limit Water Utilities and Customers

Nothing in this code is to be taken to prevent:

- (1) a **Water Utility** and a **Customer** agreeing upon alternative means of measuring and recording the consumption of water on the **Customer's Premises** otherwise than as prescribed under this Code; or
- (2) a **Water Utility** including provisions in the **Standard Customer Contract** that are more advantageous to **Customers**, or give additional rights to **Customers**, than are prescribed under this Code.

4. WATER UTILITY RIGHTS WITH RESPECT TO METERING EQUIPMENT

4.1 Water Utility May Require Installation of Metering Equipment

A **Water Utility** may include provisions in its **Standard Customer Contract** to the effect that the **Customer** shall install **Metering Equipment** to measure and record the consumption of water on the **Customer's Premises**.

5. SUPPLY OF METERING EQUIPMENT

5.1 Each Water Utility to Supply Metering Equipment

Subject to the provisions of this Code, a **Water Utility** must supply **Standard Metering Equipment** to its **Customers**.

5.2 Standard of Metering Equipment

Subject to clause 4.1, **Metering Equipment** supplied by a **Water Utility** under clause 5.1 must:

- (1) be capable of measuring and recording the consumption of water on **Customers' Premises** in accordance with any applicable tariff or other charging arrangements between the **Water Utility** and the **Customer**;
- (2) be sealed or have other appropriate protective devices to prevent or detect interference with the **Metering Equipment**; and

- (3) comply with the standards specified in clause 12.4.

5.3 New Metering Equipment

All **New Metering Equipment** supplied by a **Water Utility** must comply with the following:

- (1) a **Water Utility** must not supply **New Metering Equipment** if the equipment has not been tested for compliance with the accuracy standards of this Code;
- (2) **New Metering Equipment** must be tested in a laboratory accredited for testing water consumption measuring equipment to the accuracy standards of this Code; and
- (3) a **Water Utility** must keep records of tests performed while **Metering Equipment** of that type remains in service, or for a minimum of seven years, whichever is the shorter period.

5.4 Non-Compliance with Technical Standards

A **Water Utility** is not obliged to change or replace **Existing Metering Equipment** that does not comply with the standards specified in clause 12.4.

5.5 Standard Metering Equipment

Standard Metering Equipment:

- (1) will be that equipment determined by the **Water Utility** as appropriate in terms of type and size to meet the requirements of both the **Water Utility** and the **Customer**; and
- (2) includes the **Meter** protection cover or structure.

5.6 Meter Protection Cover or Structure

- (1) A **Water Utility** must supply an initial protective cover or structure for domestic (20mm-25mm) **Meters**. For all **Meters** greater than 25mm, the **Customer** shall be responsible for the supply and maintenance of the protective cover or structure. The cover or structure must meet standards specified in the **Water and Sewerage Service and Installation Code**.
- (2) The **Customer** will own, and must maintain, the **Meter** protection cover or structure in a manner which ensures:
 - (a) public safety; and
 - (b) accessibility for **Meter** reading.
- (3) A **Water Utility** may require the **Customer** to pay the **Costs** of repairing or replacing of the **Meter** protection cover or structure if it interferes with:
 - (a) **Meter** reliability; or
 - (b) the ability of a **Water Utility** to read the **Meter** or access the isolating valve in a safe manner.

6. COST OF SUPPLY OF METERING EQUIPMENT

6.1 Cost of Supply of Standard Metering Equipment

A **Water Utility** must supply **Standard Metering Equipment** to its **Customers** at the **Water Utility's Cost**.

6.2 Cost of Supply of Non-Standard Metering Equipment

A **Water Utility** may include provisions in its **Standard Customer Contract** to the effect that where:

- (1) the **Customer** requests a **Water Utility** to supply **Non-Standard Metering Equipment**; or
- (2) **Non-Standard Metering Equipment** is required by reason only of a tariff requested by the **Customer**;

the **Customer** must pay the difference between:

- (3) the **Cost** of supply of **Standard Metering Equipment**; and
- (4) the **Cost** of supply of the **Non-Standard Metering Equipment**.

6.3 Periodic Replacement of Meters

A **Water Utility** is required to have a testing and replacement program for the periodic replacement of **Meters** to ensure their continued accuracy. The program is to include the following components:

- (1) the timing of replacements as determined by the **Water Utility**;
- (2) the **Cost** of such replacements to be met by the **Water Utility**;
- (3) the nature of the replacement equipment to be determined by the **Water Utility**, or in agreement with the **Customer** where **Non-Standard Metering Equipment** has already been installed;
- (4) where a **Meter** is replaced, a copy of the last reading will be provided to the **Customer** and this should include a start reading of the replacement **Meter**; and
- (5) the **Water Utility** must, if so requested by a **Customer**, inform the **Customers** of the replacement program.

6.4 Numbering of Meters

- (1) All **Meters** supplied by a **Water Utility** must bear the **Water Utility's** numbering code; and
- (2) a **Water Utility** may require that the **Standard Customer Contract** provides that, if a **Meter** installed on the **Customer's Premises** does not have a **Water Utility** numbering code, the **Water Utility** may:

- (a) make a reasonable estimate of the quantity of water used by, or supplied to, the **Customer** for the relevant period; and
- (b) may charge the **Customer** for the quantity of water so estimated.

6.5 Issuing of Meters

A **Water Utility** will have procedures for the issuing of **Meters**. These procedures are to be made available to all **Persons** accredited to install the **Meters**.

7. OWNERSHIP OF METERING EQUIPMENT

7.1 Ownership of Metering Equipment

A **Water Utility** may include provisions in its **Standard Customer Contract** to the effect that:

- (1) the **Water Utility** and **Customers** agree that **Metering Equipment** supplied by the **Water Utility** is not a fixture and is, and remains, the property of the **Water Utility**; and
- (2) **Customers** must not deal, or purport to deal, with **Metering Equipment** supplied by the **Water Utility** in any way that is, or may be, contrary to the ownership or proprietary interests of the **Water Utility**.

8. INSTALLATION OF METERING EQUIPMENT

8.1 Provisions of Standard Customer Contracts

A **Water Utility** may include the following provisions in its **Standard Customer Contract**:

- (1) that **Customers** may be required to pay the **Cost** of installing **Metering Equipment**;
- (2) that **Customers** must be given the option of having **Metering Equipment** installed either by the **Water Utility** or by an **Accredited Service Provider**; and
- (3) that all **Metering Equipment** must be installed in accordance with the relevant **Service and Installation Rules**.

9. MAINTENANCE AND REPLACEMENT OF METERING EQUIPMENT

9.1 Unauthorised Interference

A **Water Utility**:

- (1) must use reasonable endeavours; and
- (2) may include provisions in its **Standard Customer Contract** that require **Customers** to use reasonable endeavours;

to protect **Metering Equipment** from unauthorised interference.

9.2 Customers Must Notify Water Utility of Damage

A **Water Utility** may include provisions in its **Standard Customer Contract** that require **Customers** to notify the **Water Utility** of any interference with, or defect or damage to, **Metering Equipment** installed on the **Customer's Premises**. This notification must be within five **Business Days** of the **Customer** becoming aware of any such interference, defect or damage.

9.3 Water Utility to Repair Metering Equipment

A **Water Utility** must:

- (1) repair or replace any defective or damaged **Metering Equipment** installed on **Customers Premises**; and
- (2) replace any broken seal on the **Metering Equipment**;

as soon as reasonably practicable after a **Water Utility** is notified of, or becomes aware of, the defect, damage or broken seal.

9.4 Cost of Repairs: Customers

A **Water Utility** may include provisions in its **Standard Customer Contract** to the effect that if:

- (1) any defect or damage to **Metering Equipment** installed on the **Customer's Premises** was caused by the **Customer**; or
- (2) any seals on that **Metering Equipment** were broken or damaged by the **Customer**;

the **Water Utility** may require the **Customer** to pay the reasonable **Costs** of repair or replacement of that **Metering Equipment** or the seal.

9.5 Cost of Repairs: Utility

If the **Customer** did not cause the damage and the **Water Utility** cannot recover the **Costs** of repair or replacement from the **Customer** under the **Standard Customer Contract**, the **Water Utility** must pay the repair and replacement **Costs**. This does not prevent a **Water Utility** from making a claim against any other **Person** responsible for damage to the **Metering Equipment** or seal.

9.6 Removal of Meters

Upon receiving notice from a **Customer** that they no longer require connection to the **Water Network**, the **Water Utility** will disconnect and remove the redundant water **Meter** and connection pipe to the **Watermain** at the **Customer's Cost**.

9.7 Removal of Meters: Monitoring System

A **Water Utility** shall maintain a water consumption monitoring system which will notify a **Water Utility** that a given water **Meter** is not being read, has ceased to function or has been removed, so that appropriate action can be taken.

9.8 Removal of Meter Without Authority

A **Water Utility** may require that it is a condition of the **Standard Customer Contract** that where a water **Meter** installed on the **Customer's Premises** has been removed without the authority of the **Water Utility**:

- (1) the **Water Utility** may require the **Customer** to pay the **Costs** of:
 - (a) installing a replacement **Meter** on the **Customer's Premises**; or
 - (b) disconnecting the **Customer's** installation from the **Watermain**; and
- (2) the **Water Utility** is entitled to make a reasonable estimate of the water consumption on the **Customer's Premises** and require the **Customer** to make payment, in accordance with clause 13.2 of this Code.

10. ACCESS TO METERING EQUIPMENT

10.1 Customer's Obligations and Cost of Access

A **Water Utility** may include provisions in its **Standard Customer Contract** that:

- (1) require a **Customer** to ensure that the **Water Utility** has unhindered access to **Metering Equipment** installed on the **Customer's Premises** to read, test, replace and/or repair that equipment; and
- (2) if a **Water Utility's** access to **Metering Equipment** installed on a **Customer's Premises** has been hindered by the **Customer**, the **Water Utility** is entitled to recover from the current **Customer** the **Water Utility's** reasonable **Costs** of gaining access to the **Metering Equipment** to read, test, replace and/or repair that equipment.

11. READING METERS

11.1 Frequency of Meter Readings

A **Water Utility** must read **Meters** as frequently as is required to properly discharge its obligations under the **Consumer Protection Code** with respect to **Customer Accounts**.

11.2 Check Readings at Request of Customer

A **Water Utility** must include provisions in its **Standard Customer Contract** that:

- (1) allow the **Customer** to request a **Water Utility** to carry out a check reading to check the accuracy of a reading given by a **Meter** installed on the **Customer's Premises**;
- (2) allow the **Customer** to only exercise this right once during each **Account Period**;
- (3) allow for the **Customer** to request additional readings at the **Customer's Cost**; and
- (4) ensure a **Water Utility** will produce and keep updated **Customer Information** that allows **Customers** to carry out basic readings on the **Meter** themselves and avoids the need for further check reads and **Meter** testing.

12. METER TESTING

12.1 Water Utility May Test Metering Equipment

A **Water Utility** may test any **Metering Equipment** at any time. All tests are to be in accordance with **Australian Standard 3565**.

12.2 Customer May Request Test

A **Water Utility** must include provisions in its **Standard Customer Contract** that:

- (1) allow the **Customer**, subject to the requirement that only the **Water Utility** may remove or re-install **Metering Equipment**, to request either a **Water Utility** or an **Accredited Service Provider** to test the **Metering Equipment** installed on the **Customer's Premises** to ascertain whether that equipment is defective;
- (2) require the test of the **Metering Equipment** to be carried out within 15 **Business Days** of an up-front payment of the required fee being made to the **Water Utility**;
- (3) give both the **Customer** and the **Water Utility** the right to be present at any test of **Metering Equipment** installed on the **Customer's Premises**; and
- (4) require the **Water Utility** to pay the **Costs** of testing **Metering Equipment** including the **Costs** to remove, test and replace the **Meter** unless:
 - (a) the **Customer** requests that **Metering Equipment** installed on the **Customer's Premises** be tested; and
 - (b) the test shows that the **Metering Equipment** is not defective;

in which case the **Customer** must pay the **Costs** of the test.

12.3 When Metering Equipment is Defective

For the purposes of this Code, **Metering Equipment** is defective if it does not measure and record the consumption of water within:

- (a) for **Meters** > 25mm in size, an accuracy range of +/-5%; and
- (b) for all other **Meters**, an accuracy range of +5% to -10%.

12.4 Technical Standards

A **Water Utility** or **Accredited Service Provider** must test **Metering Equipment** in accordance with the **Australian Standard 3565**.

13. ADJUSTMENTS TO CUSTOMER ACCOUNTS

13.1 Mandatory Standard Customer Contract Provisions

A **Water Utility** must include provisions in its **Standard Customer Contract** that require a **Water Utility** to adjust a **Customer Account** if the **Water Utility** becomes aware that:

- (1) the **Metering Equipment** installed on the **Customer's Premises** is defective; or
- (2) a check reading has shown that any reading is incorrect.

13.2 Optional Standard Customer Contract Provisions

A **Water Utility** may include provisions in its **Standard Customer Contract** that allow a **Water Utility** to make a reasonable estimate of the quantity of water supplied to the **Customer's Premises**:

- (1) for the relevant **Account Period**, where the **Metering Equipment** installed on the **Customer's Premises** cannot be read; or
- (2) where a **Meter** is not installed on the **Premises**; or
- (3) where water supplied was not registered or was wrongly registered for any period before the date upon which the **Water Utility** becomes aware that:
 - (a) **Metering Equipment** installed on the **Customer's Premises** is not working at all; or
 - (b) **Metering Equipment** installed on the **Customer's Premises** is not properly registering the quantity of water used or the demand for water in the **Customer's Premises**; or
 - (c) water has been supplied without passing through **Metering Equipment**; or
 - (d) if, for any reason, metering data is unavailable; or
- (4) where the water supplied was not registered or was wrongly registered for any period before the date upon which the **Water Utility** becomes aware that water was not registered, or was wrongly registered; or
- (5) there is substantiated evidence of fraud;

and subsequently, charge the **Customer** for supplying the quantity of water, or the demand, so estimated.

14. METERING INFORMATION

14.1 Mandatory Standard Customer Contract Provisions

A **Water Utility** must include provisions in its **Standard Customer Contract** that:

- (1) provide that the provisions of the **Consumer Protection Code** with respect to the disclosure of **Customer Information** by a **Water Utility** apply to **Metering Information**;
- (2) require a **Water Utility** to use reasonable endeavours to prevent unauthorised access to **Metering Information**;

- (3) require a **Water Utility**, at the request of the **Customer**, to provide the **Customer** with all **Metering Information** held by a **Water Utility** that concerns the **Customer**; and
- (4) require the **Customer** to pay the **Water Utility** the reasonable **Cost** of providing **Metering Information** requested under subclause 14.1(3), unless the **Metering Information** relates to the last **Account Period**.

14.2 Optional Standard Water Connection Arrangement Provisions

A **Water Utility** may include provisions in its **Standard Customer Contract** that provide that **Metering Information** is the property of the **Water Utility**.

15. DISPUTES

If a dispute arises between a **Customer** and a **Water Utility**, data stored in the **Metering Equipment** will be prima facie evidence of water supplied to the **Customer**.

DICTIONARY

- (1) **“Account Period”** has the same meaning as in the **Consumer Protection Code**;
- (2) **“Accredited Service Provider”** in relation to any work means a **Person** who is accredited to perform that work in accordance with the **Act**;
- (3) **“Act”** means the *Utilities Act 2000*;
- (4) **“Australian Standard”** or **“AS/NZS”** or **“AS”** means a standard published by the Standards Australia;
- (5) **“Business Day”** means a day, other than a Saturday, Sunday or public holiday in the **Territory**;
- (6) **“Consumer Protection Code”** means the **Consumer Protection Code** approved by **ICRC** as an **Industry Code** under Part 4 of the **Act**;
- (7) **“Cost”** includes any cost, charge, expense, outgoing, payment or other expenditure of any nature whatever, including where appropriate all reasonable and proper legal fees;
- (8) **“Customer”** has the same meaning as defined under the **Act**;
- (9) **“Customer Account”** has the same meaning as in the **Consumer Protection Code**;
- (10) **“Customer Information”** has the same meaning as in the **Consumer Protection Code**;
- (11) **“Existing Metering Equipment”** means **Metering Equipment** installed before 1 July 2001;
- (12) **“Industry Code”** means a code approved or determined by **ICRC** under Part 4 of the **Act**;
- (13) **“ICRC”** means the Independent Competition and Regulatory Commission established under section 5 of the *Independent Competition and Regulatory Commission Act 1987 (ACT)*;
- (14) **“Meter”** means a **Meter** or other apparatus for the measurement of water including any pipes and fittings ancillary to the meter or apparatus;
- (15) **“Metering Equipment”** means equipment that measures and records the consumption of water and includes the threads to that equipment as well as the protective surrounds;
- (16) **“Metering Information”** means measurements and recordings taken by **Metering Equipment**;
- (17) **“Minister”** means the **Minister** responsible for administering Part 5 of the **Act**;

- (18) **“New Metering Equipment”** means **Metering Equipment** installed on, or after, 1 July 2001;
- (19) **“Non-Standard Metering Equipment”** means **Metering Equipment** that is not **Standard Metering Equipment**;
- (20) **“Person”** includes a natural person, a firm, an unincorporated association or body corporate;
- (21) **“Premises”** has the same meaning as in the **Act**;
- (22) **“Service and Installation Rules”** means the **Service and Installation Rules** adopted or made by a **Water Utility** in accordance with the **Water and Sewerage Service and Installation Code**;
- (23) **“Standard Customer Contract”** has the same meaning and functions as defined under the **Act**;
- (24) **“Standard Metering Equipment”** means **Metering Equipment** supplied by a **Water Utility** to **Customers** to measure and record water consumed on the **Customer’s Premises**;
- (25) **“Technical Code”** means a code approved or determined by the **Minister** under Part 5 of the **Act**;
- (26) **“Territory”** means the Australian Capital Territory;
- (27) **“Utility”** has the same meaning and functions as defined under the **Act**;
- (28) **“Water and Sewerage Service and Installation Code”** means the **Water and Sewerage Service and Installation Code** approved as a **Technical Code** by the **Minister** under the **Act**.
- (29) **“Watermain”** means a **Watermain** forming part of a **Water Utility’s Water Network** as defined in the **Act**;
- (30) **“Water Metering Code”** means the **Water Metering Code** approved as a **Technical Code** by the **Minister** under the **Act**;
- (31) **“Water Network”** has the same meaning and functions as defined under the **Act**;
- (32) **“Water Services”** means those services as defined in the **Act**;
- (33) **“Water Utility”** is a **Utility** licensed under the **Act** to provide **Water Services**.

Water and Sewerage Network (Design and Maintenance) Code

December 2000



AUSTRALIAN
CAPITAL TERRITORY

TABLE OF CONTENTS

1.	APPLICATION AND PURPOSE	1
1.1	Application	1
1.2	Purpose	1
2.	DICTIONARY.....	1
2.1	Dictionary Attached	1
3.	SERVICE CAPABILITY PROJECTIONS.....	1
3.1	Service Capability Projections	1
3.2	Review of Service Capability Projections	1
4.	DESIGN REQUIREMENTS	1
4.1	General Design Goals	1
4.2	Water Network Design Goals	2
4.3	Sewerage Network Design Goals.....	2
5.	DESIGN STANDARDS.....	3
5.1	Water Network Design Standards	3
5.2	Design Standards for Major Structures	3
5.3	Water Network Design Standards and Materials.....	3
5.4	Water Network Design.....	4
5.5	Sewerage Network Design Standards.....	4
5.6	Design Standards for Major Structures	4
5.7	Sewerage Design Standards and Materials	4
5.8	Sewerage Network Design	5
6.	CONSTRUCTION	5
6.1	Water and Sewerage Network Construction	5
6.2	Major Infrastructure Construction	5
6.3	Construction Procedures	5
7.	OPERATION AND MAINTENANCE	6
7.1	Development of Operation and Maintenance Procedures Manuals	6
8.	ASSET MANAGEMENT.....	6
8.1	Preparation of Asset Registers.....	6
8.2	Asset Management Program Objectives	7
8.2	Asset Management Plans.....	7
8.3	ISO Certification	7
8.4	Available Upon Request.....	7
9.	PERFORMANCE INDICATORS AND REPORTING	7
9.1	Development of Process for Monitoring and Reporting.....	7
	SCHEDULE 1: APPLICABLE INDUSTRY STANDARDS FOR WATER SUPPLY	9

SCHEDULE 2: APPLICABLE INDUSTRY STANDARDS FOR SEWERS10
DICTIONARY11

1. APPLICATION AND PURPOSE

1.1 Application

This Code applies to **Water Utilities** and **Sewerage Utilities**.

1.2 Purpose

The purpose of this Code is to prescribe minimum standards for the design, construction, operation and maintenance of **Water Networks** and **Sewerage Networks**.

2. DICTIONARY

2.1 Dictionary Attached

The dictionary at the end of this **Water and Sewerage Network (Design and Maintenance) Code** is part of this Code.

3. SERVICE CAPABILITY PROJECTIONS

3.1 Service Capability Projections

Each **Water Utility** and **Sewerage Utility** must prepare service capability projections for the next 15 years within twelve months of **ICRC's** granting of their **Utility Services Licences**. These projections will, at a minimum, take into account:

- (1) current practices for meeting demand for services;
- (2) anticipated population and growth trends in the **Territory**;
- (3) anticipated changes in consumer demand resulting from relevant policies and initiatives, including water conservation measures;
- (4) possible community and consumer service performance expectation scenarios; and
- (5) resource gains through multiple uses of water such as **Efluent** re-use.

3.2 Review of Service Capability Projections

Water Utilities and **Sewerage Utilities** shall review their service capability projections every five years to ensure their continued relevance.

4. DESIGN REQUIREMENTS

4.1 General Design Goals

Each **Water Utility** and **Sewerage Utility** must design their **Water Networks** and **Sewerage Networks** with the intention of achieving the following goals:

- (1) to provide the most economic structure/asset to meet the service provision needs as evaluated over a whole of life cycle;
- (2) to achieve the most sustainable use of resources entrusted to the care of each **Water Utility** and **Sewerage Utility**; and
- (3) to optimise asset life.

4.2 Water Network Design Goals

The **Water Network** is to be designed, so far as reasonable and practicable, to meet the needs of the **Customer** and, in particular, so that:

- (1) the **Water Network** is able to provide water to **Customers** at all times except as permitted under the **Consumer Protection Code** or during events or conditions beyond the control of the **Water Utility**;
- (2) water of the quality specified in the **Water Supply and Sewerage Service Standards Code** and the **Drinking Water Quality Code of Practice 2000** is able to be made available at all relevant points of the **Water Network**;
- (3) the quantity of water specified in the **Water Supply and Sewerage Service Standards Code** is able to be made available through the **Water Network**;
- (4) system reliability and availability as defined in the **Water Supply and Sewerage Service Standards Code** is able to be achieved; and
- (5) the fire-fighting requirements agreed with the ACT Fire Brigade are able to be met.

4.3 Sewerage Network Design Goals

The **Sewerage Network** is to be designed, so far as reasonable and practicable, to ensure all **Customers'** sewage is collected and moved to the **Sewage Treatment Plant** in such a manner as to:

- (1) facilitate the **Sewage Treatment Plant's** ability to treat the sewage;
- (2) minimise the production of odours which might emanate from the **Sewerage Network**;
- (3) minimise the accumulation of solids and gases in the **Sewer mains**;
- (4) minimise any **Overflows** in the **Sewerage Network** and into **Customers' Premises**;
- (5) achieve **Sewerage Network** reliability and availability as defined in the **Water Supply and Sewerage Standards Code**; and
- (6) enhance the potential for reuse of treated **Effluent**.

5. DESIGN STANDARDS

5.1 Water Network Design Standards

A **Water Utility** must develop, maintain and implement design standards for the **Water Network** that are consistent with the standards listed in Schedule 1 to this Code.

At a minimum, the design standards must address the following:

- (1) design responsibilities;
- (2) hydraulic design;
- (3) structural design;
- (4) valves and hydrants;
- (5) connections;
- (6) construction and materials;
- (7) testing;
- (8) commissioning;
- (9) handover and acceptance procedures; and
- (10) standards listed in Schedule 1, as amended from time to time, covering water supply practices.

5.2 Design Standards for Major Structures

A **Water Utility** must ensure design standards for major **Water Network** structures including:

- (1) dams;
- (2) major pipe lines;
- (3) pump stations;
- (4) reservoirs; and
- (5) treatment plants;

are on the basis of a functional specification.

5.3 Water Network Design Standards and Materials

A **Water Utility** must ensure that the **Water Network** design standards specify the materials to be used in the construction, maintenance and operation of the **Water Network**. At a minimum, the design standards relating to materials to be used must specify that:

- (1) materials are to be suitable for the safe operational performance of the **Water Network**; and
- (2) materials are to comply with acceptable and established industry standards, and within a reasonable period with such standards as they are amended or updated from time to time.

5.4 Water Network Design

A **Water Utility** should apply established industry practice to all design practices.

5.5 Sewerage Network Design Standards

A **Sewerage Utility** must develop, maintain and implement design standards for the **Sewerage Network**, which are consistent with the standards listed in Schedule 2 to this Code.

As a minimum, the design standards must address the following:

- (1) design responsibilities;
- (2) hydraulic design;
- (3) structural design;
- (4) connections;
- (5) construction and materials;
- (6) testing, commissioning, handover and acceptance procedures; and
- (7) standards, listed in Schedule 2, as amended from time to time, covering sewerage practices.

5.6 Design Standards for Major Structures

A **Sewerage Utility** must ensure design standards for major **Sewerage Network** structures including:

- (1) sewage pump stations;
- (2) major sewers; and
- (3) treatment plants and associated structures;

are on the basis of a functional specification.

5.7 Sewerage Design Standards and Materials

A **Sewerage Utility** must ensure that the **Sewerage Network** design standards specify the materials to be used in the construction, maintenance and operation of the **Sewerage Network**. At a minimum, the design standards relating to materials to be used must specify that:

- (1) materials are to be suitable for safe operational performance of the **Sewerage Network**; and
- (2) materials are to comply with acceptable and established industry standards, and, within a reasonable period with such standards as they are amended or updated from time to time.

5.8 Sewerage Network Design

A **Sewerage Utility** should apply relevant established industry practice to all **Sewerage Network** practices.

6. CONSTRUCTION

6.1 Water and Sewerage Network Construction

Where a **Water Utility** and **Sewerage Utility** undertake construction, it must be undertaken in a manner that:

- (1) is in accordance with **Australian Standards**;
- (2) is in accordance with all **Territory** laws;
- (3) ensures community safety and the protection of the environment at all times during the construction process; and
- (3) aims to achieve the designed performance levels.

6.2 Major Infrastructure Construction

Each **Water Utility** and **Sewerage Utility** must ensure that the decision to construct major infrastructure for their **Water Networks** and **Sewerage Networks** takes into account the following factors:

- (1) future demand assessment;
- (2) capacity and performance;
- (3) network development strategies;
- (4) load monitoring; and
- (5) environmental limitations.

6.3 Construction Procedures

Each **Water Utility** and **Sewerage Utility** must have procedures for the design and construction of major infrastructure for their **Water Networks** and **Sewerage Networks** that deal with:

- (1) planning and development;
- (2) project approval;
- (3) construction and completion; and

- (4) project handover.

7. OPERATION AND MAINTENANCE

7.1 Development of Operation and Maintenance Procedures Manuals

Each **Water Utility** and **Sewerage Utility** must develop and maintain operational and maintenance procedures for larger assets within their **Water Networks** and **Sewerage Networks**. At a minimum, the procedures should deal with:

- (1) system control;
- (2) process control; and
- (3) inspection and testing.

8. ASSET MANAGEMENT

8.1 Preparation of Asset Registers

Each **Water Utility** and **Sewerage Utility** must, within twelve months following **ICRC's** grant of their **Utility Services Licences**:

- (1) prepare an Asset Register listing their principal **Water Network** and **Sewerage Network** assets; and
- (2) adopt an appropriate system for the classification of **Water Network** and **Sewerage Network** infrastructure assets, which may include:
 - (a) storage facilities, including dams, reservoirs or retention facilities;
 - (b) treatment plants;
 - (c) reticulation; and
 - (d) pump stations;

but not including:

 - (e) telemetry equipment;
 - (f) pressure and flow monitoring equipment;
 - (g) process control facilities;
 - (h) analytical and sampling equipment;
 - (i) computers and software;
 - (j) communications equipment;
 - (k) vehicles;
 - (l) general land and buildings;

- (m) site security; and
- (n) heat and power plants.

8.2 Asset Management

Each **Water Utility** and **Sewerage Utility** must take all reasonable steps to ensure the assets are managed to enable compliance with **the Water and Sewerage Service and Installation Code, the Water Supply and Sewerage Service Standards Code** and the **Consumer Protection Code**.

Water Utilities and **Sewerage Utilities** must assess and prioritise asset management program needs which includes:

- (1) accounting for new or upgraded works identified as desirable because of growth, regulatory requirements, operational efficiency or replacement of assets that are uneconomic to operate or maintain in their current form; and
- (2) employing a consistent assessment system that accounts for:
 - (a) asset condition;
 - (b) timing and amount of expenditure; and
 - (c) impact of failure to act.

8.3 Asset Management Plans

Each **Water Utility** and **Sewerage Utility** must have asset management plans that can be certified to **AS/NZS ISO 9001:1994** or similar standard.

8.4 Asset Management System Audit

Each **Water Utility** and **Sewerage Utility** should make the asset management plans subject to **AS/NZS ISO 9001:1994**.

8.5 Plans Available Upon Request

Each **Water Utility** and **Sewerage Utility** must make the asset management plans available to the **Chief Executive** upon request.

9. PERFORMANCE INDICATORS AND REPORTING

9.1 Development of Process for Monitoring and Reporting

Each **Water Utility** and **Sewerage Utility** must develop and maintain processes for monitoring and reporting their performance in relation to the requirements of this code against the following:

- (1) national industry performance indicators, as defined by bodies such as the Water Services Association of Australia and appropriate to the **Territory**, to enable effective industry benchmarking; and

- (2) the service standards specified in the **Water Supply and Sewerage Standards Code** and any other relevant codes made under the **Act**;

SCHEDULE 1: APPLICABLE INDUSTRY STANDARDS FOR WATER SUPPLY

SAA Codes and Standards

(include current amendments at the time of use)

AS 2280	AS 1302
AS 3680	AS 1303
AS 3681	AS 1304
AS 1646	AS 1554
AS 1477	AS 3680
AS 4130	AS 3681
AS 4131	AS 3500
AS 4129 (Int)	AS 2033
AS 1579	AS 2648
AS 3678	AS 1462
AS 1281	AS 3725
AS 4087	AS 1289
AS 1646	AS 360
AS 1548	AS 4100
AS 2638	AS 1650
AS 3578	AS 2566
AS 1432	AS 2032
AS 2528	AS 4087
AS 1214	AS 3952
AS 2118	

SCHEDULE 2: APPLICABLE INDUSTRY STANDARDS FOR SEWERS

SAA Codes and Standards

(include current amendments at the time of use)

AS 3725

AS 4060

AS 2566

AS 4058

AS 3972

AS 1741

AS 1646

AS 2200

AS 1260

AS 1289

AS 1830

AS 3996

AS 2648

AS 2032

DICTIONARY

- (1) “**Act**” means the *Utilities Act 2000*;
- (2) “**Australian Standard**” or “**AS/NZS**” or “**AS**” means a standard published by the Standards Australia;
- (3) “**Chief Executive**” has the same meaning and functions as defined under the **Act**;
- (4) “**Consumer Protection Code**” means the **Consumer Protection Code** approved by ICRC as an **Industry Code** under Part 4 of the **Act**;
- (5) “**Customer**” has the same meaning as defined under the **Act**;
- (6) “**Drinking Water Quality Code of Practice 2000**” means the **Drinking Water Quality Code of Practice 2000** made under the *Public Health Act 1997*;
- (7) “**Effluent**” is the term used to describe treated sewage that is considered safe for discharge back into the environment or for reuse as a water supply supplement;
- (8) “**Industry Code**” means a code approved or determined by ICRC under Part 4 of the **Act**;
- (9) “**ICRC**” means the Independent Competition and Regulatory Commission established under section 5 of the *Independent Competition and Regulatory Commission Act 1987 (ACT)*;
- (10) “**Minister**” means the **Minister** responsible for administering Part 5 of the **Act**;
- (11) “**Overflow**” means a spillage from a **Sewerage Utility’s Sewerage Network** into the surrounding environment;
- (12) “**Sewage Treatment Plant**” describes that part of a **Sewerage Network** in which raw sewage is treated;
- (13) “**Sewerage Network**” has the same meaning and functions as defined under the **Act**;
- (14) “**Sewerage Utility**” has the same meaning and functions as defined under the **Act**;
- (15) “**Sewermain**” means a pipeline forming part of the **Sewerage Utility’s Sewerage Network** as defined in the **Act**;
- (16) “**Technical Code**” means a code approved or determined by the **Minister** under Part 5 of the **Act**;
- (17) “**Territory**” means the Australian Capital Territory;

- (18) **“Utility”** has the same meaning and functions as defined under the **Act**;
- (19) **“Utility Services Licence”** means a licence granted to a **Utility** by **ICRC** under Part 3 of the **Act**;
- (20) **“Water and Sewerage Network (Design and Maintenance) Code”** means the **Water and Sewerage Network (Design and Maintenance) Code** approved as a **Technical Code** by the **Minister** under the **Act**;
- (21) **“Water and Sewerage Service and Installation Code”** means the **Water and Sewerage Service and Installation Code** approved as a **Technical Code** by the **Minister** under the **Act**;
- (22) **“Water Network”** has the same meaning as under the **Act**;
- (23) **“Water Services”** means those services as defined in the **Act**;
- (24) **“Water Supply and Sewerage Standards Code”** means the **Water Supply and Sewerage Standards Code** approved by the **Minister** as a **Technical Code** under the **Act**;
- (25) **“Water Utility”** is a **Utility** licensed under the **Act** to provide **Water Services**.

Dam Safety Code

December 2000



AUSTRALIAN
CAPITAL TERRITORY

TABLE OF CONTENTS

1.	PURPOSE OF THIS CODE	1
1.1	Application	1
1.2	Purpose	1
2.	DICTIONARY.....	1
2.1	Dictionary Attached.....	1
3.	OPERATION AND MAINTENANCE OF DAMS.....	1
3.1	Each Water Utility Must Comply with Guidelines	1
3.2	Each Water Utility to Report on Compliance	1
4.	DAM SURVEILLANCE	1
4.1	Dam Surveillance Program.....	1
4.2	Program Available for Chief Executive	2
5.	DAM EMERGENCY PREPAREDNESS PLANS.....	2
5.1	Preparation of Dam Emergency Preparedness Plans	2
5.2	Contents of Dam Emergency Preparedness Plans	2
5.3	Approval of Dam Emergency Preparedness Plans.....	3
5.4	Amendments to Proposed Dam Emergency Preparedness Plans	3
5.5	Water Utility to Make Proposed Amendments	3
5.6	Chief Executive Submission of Dam Emergency Preparedness Plans	3
6.	EMERGENCY EVENT REPORTING.....	3
6.1	Emergency Event Report to Chief Executive.....	3
6.2	Content of Emergency Event Report	3
6.3	The Chief Executive May Give Direction to Utility.....	4
7.	INSPECTION OF RECORDS	4
7.1	Each Water Utility to Keep Records	4
	SCHEDULE 1: DAMS.....	5
	DICTIONARY	6

1. PURPOSE OF THIS CODE

1.1 Application

This Code applies to **Water Utilities**.

1.2 Purpose

The purpose of this Code is to ensure **Dams** are properly managed in order to prevent unsafe operation and/or failure that can, in turn, cause loss of life and damage to property and the environment.

2. DICTIONARY

2.1 Dictionary Attached

The dictionary at the end of this **Dam Safety Code** is part of this Code.

3. OPERATION AND MAINTENANCE OF DAMS

3.1 Each Water Utility Must Comply with Guidelines

Each **Water Utility** must operate and maintain the **Dams** owned or controlled by them in accordance with:

- (1) **ANCOLD Guidelines**; and
- (2) **NSW Dam Safety Committee Technical Guidelines**.

3.2 Each Water Utility to Report on Compliance

Each **Water Utility** must provide a written report annually to the **Chief Executive** in the form required by the **Chief Executive** that:

- (1) lists each requirement under both the **ANCOLD Guidelines** and the **NSW Dam Safety Committee Technical Guidelines** applicable to the **Dams** owned or controlled by it;
- (2) for each of those requirements, details as to whether the **Water Utility** has complied with those requirements;
- (3) for any requirements with which the **Water Utility** has failed to comply, a proposed course of action to ensure that, as soon as practicable, the **Water Utility** complies with these requirements; and
- (4) for any requirements with which the **Water Utility** has failed to comply, whether the **Water Utility** subsequently complied with these requirements and, if not, why not.

4. DAM SURVEILLANCE

4.1 Dam Surveillance Program

Each **Water Utility** must develop and maintain a Dam Surveillance Program for each **Dam**. Each Dam Surveillance Program must:

- (1) be developed and maintained in accordance with current good industry and engineering practice as defined in the **ANCOLD Guidelines** and the **NSW Dam Safety Committee Technical Guidelines**;
- (2) be under the direct supervision of a competent Dam Safety Engineer;
- (3) include routine dam surveillance, the results of which must be documented annually; and
- (4) include comprehensive dam surveillance conducted on a rolling five year program.

4.2 Program Available for Chief Executive

Details of the Dam Surveillance Programs and the documented results of dam surveillance must be made available, on request, to the **Chief Executive**.

5. DAM EMERGENCY PREPAREDNESS PLANS

5.1 Preparation of Dam Emergency Preparedness Plans

Each **Water Utility** must, within 6 months of the grant of its **Utility Services Licence**, and annually thereafter:

- (1) prepare a draft Dam Emergency Preparedness Plan for each **Dam** that it owns and/or operates; and
- (2) submit the Dam Emergency Preparedness Plans to the **Chief Executive** for approval.

5.2 Contents of Dam Emergency Preparedness Plans

Each Dam Emergency Preparedness Plan must, at a minimum, contain the following information for the relevant **Dam**:

- (1) details of emergency situations:
 - (a) failure situations;
 - (b) impending failure situations;
 - (c) flooding;
 - (d) earthquake; and
 - (e) unusual occurrences;
- (2) dam failure inundation maps for “clear day”, “imminent failure flood” and “overtopping failure floods”;
- (3) define key roles of staff employed by the **Water Utility** and attendance procedures;
- (4) identify relevant emergency service organisations and provide a notification directory for these organisations;
- (5) prescribe dam emergency preparedness alerts and emergency classifications;

- (6) prescribe communications and responsibilities for each authority involved, for example, Dam Manager, Dam Safety Engineer, ACT Police (Australian Federal Police), the ACT Emergency Services Bureau, NSW State Emergency Services and NSW Police; and
- (7) provide details of any installed warning systems.

5.3 Approval of Dam Emergency Preparedness Plans

As soon as practicable after the **Water Utility** submits the Dam Emergency Preparedness Plans to the **Chief Executive** for approval, the **Chief Executive** will:

- (1) consult with interested parties including, but not limited to, the ACT Emergency Services Bureau; and
- (2) may either:
 - (a) approve the Dam Emergency Preparedness Plans or
 - (b) require the **Water Utility** to amend one or more of the Dam Emergency Preparedness Plans.

5.4 Amendments to Proposed Dam Emergency Preparedness Plans

The **Chief Executive** may direct a **Water Utility** to amend a proposed Dam Emergency Preparedness Plan or Plans only if, in the **Chief Executive's** reasonable opinion, the proposed plan or plans do not adequately address any one or more of the matters referred to in clause 5.2.

5.5 Water Utility to Make Proposed Amendments

If the **Chief Executive** directs a **Water Utility** to amend its proposed Dam Emergency Preparedness Plan or Plans under clause 5.4, the **Water Utility** must in good faith and within 14 days of receipt of the **Chief Executive's** direction prepare and submit a revised Plan or Plans to the **Chief Executive** for approval.

5.6 Chief Executive Submission of Dam Emergency Preparedness Plans

As soon as practicable after approving a Dam Emergency Preparedness Plan the **Chief Executive** must submit the Plan to interested parties including, but not limited to, the ACT Emergency Services Bureau.

6. EMERGENCY EVENT REPORTING

6.1 Emergency Event Report to Chief Executive

Each **Water Utility** must send a written **Emergency Event** Report to the **Chief Executive** not later than:

- (1) five **Business Days** after the occurrence of an **Emergency Event**; and/or
- (2) five **Business Days** after receiving a request from the **Chief Executive**,

6.2 Content of Emergency Event Report

An **Emergency Event** Report must be in the form required from time to time by the **Chief Executive** and, in the case of an **Emergency Event** Report submitted under clause 6.1(2), it must contain the following:

- (1) details of the event and the **Dam** at which the event took place;
- (2) the time and date at which the event took place;
- (3) notification involved;
- (4) agencies notified;
- (5) the status of the **Dam**;
- (6) maintenance details and other actions to be taken by the **Water Utility** to ensure the long term safety of the **Dam**; and
- (7) any other details requested by the **Chief Executive**.

6.3 The Chief Executive May Give Direction to Utility

If, on the basis of an **Emergency Event** Report, the **Chief Executive** is not satisfied with:

- (1) a **Water Utility's** adherence to its respective Dam Emergency Preparedness Plan following an **Emergency Event**; and/or
- (2) a **Water Utility's** compliance with the **ANCOLD Guidelines** and/or **NSW Dam Safety Committee Technical Guidelines** following an **Emergency Event**,

the **Chief Executive** may give a direction to the **Water Utility**.

7. INSPECTION OF RECORDS

7.1 Each Water Utility to Keep Records

Each **Water Utility** must keep, or cause to be kept, comprehensive and accurate records of:

- (1) compliance with the requirements of the **ANCOLD Guidelines** and the **NSW Dam Safety Committee Technical Guidelines**;
- (2) compliance with the requirements of this Code; and
- (3) any other matters reasonably required by the **Chief Executive**.

SCHEDULE 1: DAMS

- (1) The dam known as Cotter Dam located on the Cotter River.
- (2) The dam known as Bendora Dam located on the Cotter River.
- (3) The dam known as Corin Dam located on the Cotter River.
- (4) The dam known as Googong Dam located on the Queanbeyan River.
- (5) The Lower Molonglo Water Quality Control Centre Bypass Storage Dam.

DICTIONARY

- (1) “**Act**” means the *Utilities Act 2000*;
- (2) “**ANCOLD**” means the Australian National Committee on Large Dams;
- (3) “**ANCOLD Guidelines**” means the most recent “*Guidelines on Dam Safety and Management*” published by **ANCOLD**;
- (4) “**Business Day**” means a day, other than a Saturday, Sunday or public holiday in the **Territory**;
- (5) “**Chief Executive**” has the same meaning and functions as defined under the **Act**;
- (6) “**Dam**” means a dam referred to in Schedule 1 of the **Dam Safety Code** and includes appurtenant works;
- (7) “**Dam Safety Code**” means the **Dam Safety Code** approved as a **Technical Code** by the **Minister** under the **Act**;
- (8) “**Emergency Event**” means an emergency as defined from time to time under the **ANCOLD Guidelines** and these may include seismic, flood, landslides, or other unusual events such as sabotage;
- (9) “**ICRC**” means the Independent Competition and Regulatory Commission established under section 5 of the *Independent Competition and Regulatory Commission Act 1987 (ACT)*;
- (10) “**Minister**” means the **Minister** responsible for administering Part 5 of the **Act**;
- (11) “**NSW Dam Safety Committee**” means the Dam Safety Committee constituted under the *Dam Safety Act 1978 (NSW)*;
- (12) “**NSW Dam Safety Committee Technical Guidelines**” means the technical guidelines published from time to time by the **NSW Dam Safety Committee**;
- (13) “**Technical Code**” means a code approved or determined by the **Minister** under Part 5 of the **Act**;
- (14) “**Territory**” means the Australian Capital Territory;
- (15) “**Utility**” has the same meaning and functions as defined under the **Act**;
- (16) “**Utility Services Licence**” means a licence granted to a **Utility** by **ICRC** under Part 3 of the **Act**;
- (17) “**Water Services**” means those services as defined in the **Act**;
- (18) “**Water Utility**” is a **Utility** licensed under the **Act**, to provide **Water Services**.

Water and Sewerage Service and Installation Code

December 2000



AUSTRALIAN
CAPITAL TERRITORY

TABLE OF CONTENTS

1.	APPLICATION AND PURPOSE	1
1.1	Application	1
1.2	Purpose	1
2.	DICTIONARY	1
2.1	Dictionary Attached.....	1
3.	DEVELOPMENT OF SERVICE AND INSTALLATION RULES.....	1
3.1	Preparation or Adoption of Interim Service and Installation Rules	1
3.2	Preparation or Adoption of Final Service and Installation Rules.....	1
3.3	Service and Installation Rules to Comply with this Code.....	1
3.4	Publication of Service and Installation Rules	1
3.5	Water Utility and Sewerage Utility Compliance	2
4.	GENERAL REQUIREMENTS FOR CONTENT.....	2
4.1	Minimum Content of Service and Installation Rules	2
4.2	Optional Content of Service and Installation Rules	2
4.3	Specific Content for a Water Utility	3
4.4	Specific Content for a Sewerage Utility	4
4.5	Other Requirements	4
5.	COMMON TRENCHING	4
	DICTIONARY	5

1. APPLICATION AND PURPOSE

1.1 Application

This Code applies to **Water Utilities** and **Sewerage Utilities**.

1.2 Purpose

The purpose of this Code is to require **Water Utilities** and **Sewerage Utilities** to develop **Service and Installation Rules** that set out the requirements and associated obligations and procedures for the safe, reliable and efficient connection of a **Customer's Premises** to a **Water Network** and a **Sewerage Network**.

2. DICTIONARY

2.1 Dictionary Attached

The dictionary at the end of this **Water and Sewerage Service and Installation Code** is part of this Code.

3. DEVELOPMENT OF SERVICE AND INSTALLATION RULES

3.1 Preparation or Adoption of Interim Service and Installation Rules

Each **Water Utility** and **Sewerage Utility** must, within six months following the grant of its **Utility Services Licence**:

- (1) prepare its own interim **Service and Installation Rules**; or
- (2) adopt interim **Service and Installation Rules** developed by another **Person**.

3.2 Preparation or Adoption of Final Service and Installation Rules

Each **Water Utility** and **Sewerage Utility** must, within one year following the grant of its **Utility Services Licence**:

- (1) undertake a public consultation program to solicit and account for stakeholder, **Customer** and community interest views about the interim **Service and Installation Rules**;
- (2) prepare and adopt its own final **Service and Installation Rules**, based on good industry practice and taking into account the public consultation program and validated by independent audit; or
- (3) adopt final **Service and Installation Rules** developed by another **Person**.

3.3 Service and Installation Rules to Comply with this Code

All **Service and Installation Rules** must comply with the terms of this Code.

3.4 Publication of Service and Installation Rules

Each **Water Utility** and **Sewerage Utility** must, as soon as possible after adopting final **Service and Installation Rules**:

- (1) publish the **Service and Installation Rules**; and

- (2) provide a copy of the **Service and Installation Rules** to the **Chief Executive**.

3.5 Amendment of Service and Installation Rules

A **Water Utility** or a **Sewerage Utility** may, from time to time, taking into account good industry practice, amend its **Service and Installation Rules** if:

- (1) it is reasonably necessary in the opinion of the **Utility**;
- (2) the **Utility** has undertaken a public consultation program in relation to the amendments; and
- (3) a copy of the amended **Service and Installation Rules** is provided to the **Chief Executive**.

3.6 Water Utility and Sewerage Utility Compliance

Each **Water Utility** and **Sewerage Utility** must comply with all the terms of any **Service and Installation Rules** it adopts.

4. GENERAL REQUIREMENTS FOR CONTENT

4.1 Minimum Content of Service and Installation Rules

Service and Installation Rules must:

- (1) seek to preserve the security, reliability and the safety of the **Water Network** and the **Sewerage Network**, while minimising interference to **Customers**;
- (2) seek to adopt standard industry practices;
- (3) align with the service delivery standards specified in the **Water and Sewerage (Design and Maintenance) Code** and the **Water Supply and Sewerage Service Standards Code**; and
- (4) specify requirements for the standard method of connection to the **Water Network** and the **Sewerage Network** and specify alternative methods of connection.

4.2 Optional Content of Service and Installation Rules

In addition, **Service and Installation Rules** may:

- (1) apply to a new water and sewerage installation, or to an addition or alteration to an existing water and sewerage installation;
- (2) allow a **Water Utility** or **Sewerage Utility** to waive or modify a part of the **Service and Installation Rules**, providing that the waiver or modification is approved, in writing, by the **Water Utility** or **Sewerage Utility**, whichever the case may be;
- (3) state that, if a **Customer** fails to comply with the **Service and Installation Rules**, a **Water Utility** or **Sewerage Utility**:
 - (a) may refuse to supply the **Customer** with water or sewerage services; or

- (b) may restrict or disconnect the water supply to the **Customer's Premises**, in which case the **Service and Installation Rules** may state that:
 - (i) a **Water Utility** may require the **Customer** to pay a **Water Utility** a sum that represents the **Water Utility's** reasonable expenses incurred due to the restriction or disconnection; and
 - (ii) a **Water Utility** will not restore the water supply until the **Customer** has complied with the **Service and Installation Rules** and paid the **Water Utility's Costs**.

4.3 Specific Content for a Water Utility

Each **Water Utility** will prepare or adopt **Service and Installation Rules** that will specify, as a minimum:

- (1) a **Water Utility's** requirement for **Customers** to install backflow prevention equipment on their supply lines to prevent contamination of the **Water Network**;
- (2) a **Water Utility's** requirement for **Customers** to keep potable, irrigation and fire fighting water supplies separate but may specify the following requirements if those supplies are to be combined:
 - (a) that the combined flow arrangements meet a **Water Utility's** technical standards, including metering;
 - (b) that backflow prevention measures are provided on the irrigation and fire fighting supplies; and
 - (c) that where the potable water supply is delivered through a pipe sized for fire flows, the **Customer** assumes responsibility for any water quality problems resulting from the long retention time of the water in the common pipe;
- (3) in relation to water **Metering Equipment**:
 - (a) the location of the **Meter** on the **Customer's Premises** and the conditions under which it may be relocated;
 - (b) the access requirements; and
 - (c) that a **Customer** may be required to provide and maintain on their **Premises** and at their expense, space, housing mounting and connecting facilities for **Metering Equipment**;
- (4) a **Water Utility** will prepare or adopt **Service and Installation Rules** that must be consistent with **Australian Standard 3500**; and
- (5) a **Water Utility** may include provisions in its **Service and Installation Rules** relating to the fitting of remote reading and data logging devices to water **Meters** by **Customers**.

4.4 Specific Content for a Sewerage Utility

A **Sewerage Utility** will prepare or adopt **Service and Installation Rules** that will specify, as a minimum:

- (1) sewage quality acceptance limits for the **Customer's** sewage, other than **Domestic Sewage** and waste water arising from **Domestic Water** use, that the **Sewerage Utility** is prepared to accept into its sewers in accordance with the **Water Supply and Sewerage Service Standards Code**;
- (2) any prohibitions relating to rainwater drainage and run-off into the **Sewerage Network** in accordance with the **Water Supply and Sewerage Service Standards Code** and any consequent notification procedures in relation to system surcharging; and
- (3) any **Customer** responsibilities or liabilities, for example:
 - (a) for providing materials and labour to construct and maintain **Sewerage Connections** both upstream of, and at the **Designated Connection Point** of, the **Sewerage Network**;
 - (b) for paying the **Cost** to repair damage caused by blockages both upstream of, and at, the **Designated Connection Point**;
 - (c) for any damage resulting from the overflow into the **Customer's** dwelling should the floor level of the **Customer's** dwelling lie below the obvert level of the sewer at the sewer tie point;
 - (d) for clearing blockages in house drains; and
 - (e) for paying the **Cost** to repair damage to house drains.

4.5 Other Requirements

Service and Installation Rules may contain other provisions consistent with clause 4.

5. COMMON TRENCHING

If no common trenching agreement is in place, the **Service and Installation Rules** may authorise, subject to conditions set by the **Service and Installation Rules**, the use by other services of a trench excavated for a **Water Utility's** or **Sewerage Utility's** pipelines.

DICTIONARY

- (1) “**Act**” means the *Utilities Act 2000*;
- (2) “**Australian Standard**” or “**AS/NZS**” or “**AS**” means a standard published by the Standards Australia;
- (3) “**Chief Executive**” has the same meaning and functions as defined under the **Act**;
- (4) “**Cost**” includes any cost, charge, expense, outgoing, payment or other expenditure of any nature whatever, including where appropriate all reasonable and proper legal fees;
- (5) “**Customer**” has the same meaning as defined under the **Act**;
- (6) “**Designated Connection Point**” is that point referred to on the approved drainage plan, identifying where the **Sewerage Network** connection point for that property has been established;
- (7) “**Domestic Sewage**” has the same meaning as in the **Sewerage Utility’s** published guidelines;
- (8) “**Domestic Water**” means the use of water for normal human activities within the residential home. These activities typically include, but are not limited to:
 - drinking water;
 - cooking;
 - showering /bathing;
 - dishwashing;
 - clothes/laundry washing;
 - toiletry and household cleaning uses;
 - reasonable irrigation of a limited garden; and
 - non-commercial vehicle washing.

It does not include activities such as using water for the disposal of pesticides, pharmaceuticals, paint and hydro-carbon products.
- (9) “**ICRC**” means the Independent Competition and Regulatory Commission established under section 5 of the *Independent Competition and Regulatory Commission Act 1987 (ACT)*;
- (10) “**Meter**” means a **Meter** or other apparatus for the measurement of water including any pipes and fittings ancillary to the meter or apparatus;
- (11) “**Metering Equipment**” means equipment that measures and records the consumption of water and includes the threads to that equipment as well as the protective surrounds;
- (12) “**Minister**” means the **Minister** responsible for administering Part 5 of the **Act**;
- (13) “**Person**” includes a natural person, a firm, an unincorporated association or body corporate;
- (14) “**Premises**” has the same meaning as in the **Act**;

- (15) “**Service and Installation Rules**” means the **Service and Installation Rules** adopted or made by a **Water Utility** in accordance with the **Water and Sewerage Service and Installation Code**;
- (16) “**Sewerage Connection**” describes that length of pipe including all fittings that traverses between the **Designated Connection Point** and the **Sewermains**;
- (17) “**Sewerage Network**” has the same meaning and functions as defined under the **Act**;
- (18) “**Sewerage Utility**” has the same meaning and functions as defined under the **Act**;
- (19) “**Sewermain**” means a pipeline forming part of the **Sewerage Utility’s Sewerage Network** as defined in the **Act**;
- (20) “**Technical Code**” means a code approved or determined by the **Minister** under Part 5 of the **Act**;
- (21) “**Utility**” has the same meaning and functions as defined under the **Act**;
- (22) “**Utility Services Licence**” means a licence granted to a **Utility** by **ICRC** under Part 3 of the **Act**;
- (23) **Industry Code** by **ICRC** under Part 4 of the **Act**;
- (24) “**Water and Sewerage Network (Design and Maintenance) Code**” means the **Water and Sewerage Network (Design and Maintenance) Code** approved as a **Technical Code** by the **Minister** under the **Act**;
- (25) “**Water and Sewerage Service and Installation Code**” means the **Water and Sewerage Service and Installation Code** approved as a **Technical Code** by the **Minister** under of the **Act**.
- (26) “**Water Network**” has the same meaning and functions as defined under the **Act**;
- (27) “**Water Services**” means those services as defined in the **Act**;
- (28) “**Water Supply and Sewerage Standards Code**” means the **Water Supply and Sewerage Standards Code** approved by the **Minister** as a **Technical Code** under the **Act**;
- (29) “**Water Utility**” is a **Utility** licensed under the **Act** to provide **Water Services**.

Emergency Planning Code

December 2000



AUSTRALIAN
CAPITAL TERRITORY

Authorised by the ACT Parliamentary Counsel—also accessible at www.legislation.act.gov.au

TABLE OF CONTENTS

1.	PURPOSE OF THIS CODE	1
1.1	Application	1
1.2	Purpose	1
2.	DICTIONARY.....	1
2.1	Dictionary Attached.....	1
3.	EFFECT OF CODE.....	1
3.1	Exercise of Emergency Powers under other Legislation	1
4.	REQUIREMENT TO DEVELOP EMERGENCY PLANS.....	1
4.1	Preparation of Emergency Plans	1
4.2	Approval of Emergency Plans	1
4.3	Amendments to Emergency Plans	2
4.4	Utility to Make Proposed Amendments.....	2
4.5	Chief Executive Submission of Emergency Plans	2
5.	CONTENT OF AN EMERGENCY PLAN.....	2
5.1	Emergency Events.....	2
5.2	Emergency Plan not to be Inconsistent	3
5.3	Requirement to Ration, Cut-Off or otherwise affect the Provision of a Utility Service.....	3
5.4	Specified Actions	3
5.5	Key Personnel	3
5.6	Training.....	3
5.7	Notification	3
5.8	Communication Strategy	4
5.9	Effective Emergency Plans.....	4
6.	EMERGENCY EVENT REPORTING.....	4
6.1	Notification at Time of Emergency Event	4
6.2	Emergency Event Report to Chief Executive.....	5
6.3	Content of Emergency Event Report	5
6.4	Emergency Events Reports submitted under the Dam Safety Code	5
6.5	Chief Executive May Give Direction to Utility.....	5
7.	INSPECTION OF RECORDS	5
7.1	Each Utility to Keep Records	5
8.	DUTY OFFICERS	6
9.	COMPLIANCE WITH AN EMERGENCY PLAN.....	6
9.1	Utility to Comply with Emergency Plan	6
10.	CO-OPERATION WITH OTHER UTILITIES	6
10.1	Utilities may make arrangements for cooperation.....	6
	DICTIONARY	7

1. PURPOSE OF THIS CODE

1.1 Application

This Code applies to **Electricity Distributors** and **Water Utilities** (“**Utilities**”).

1.2 Purpose

The purpose of this Code is to ensure **Utilities** have in place appropriate procedures, structures and arrangements for preventing, anticipating and responding to **Emergency Events** and potential **Emergency Events** by requiring **Utilities** to:

- (1) develop and periodically review **Emergency Plans**;
- (2) report to the **Chief Executive** on compliance with this Code and with **Emergency Plans**; and
- (3) develop cooperative arrangements with other **Utilities**.

2. DICTIONARY

2.1 Dictionary Attached

The dictionary at the end of this **Emergency Planning Code** is part of this Code.

3. EFFECT OF CODE

3.1 Exercise of Emergency Powers under other Legislation

Nothing in this Code affects the exercise of any power, or a **Utility’s** obligation to comply with any direction or requirements under the *Emergency Management Act 1999*, the **NEMMCO** Memorandum of Understanding on the Use of Emergency Powers, and the Utilities Act.

4. REQUIREMENT TO DEVELOP EMERGENCY PLANS

4.1 Preparation of Emergency Plans

Each **Utility** must, within 6 months of the grant of its **Utility Services Licence**, and annually thereafter:

- (1) prepare a draft **Emergency Plan**; and
- (2) submit the **Emergency Plan** to the **Chief Executive** for approval.

4.2 Approval of Emergency Plans

As soon as practicable after the **Utility** submits the **Emergency Plan** to the **Chief Executive** for approval, the **Chief Executive** must:

- (1) consult with interested parties including, but not limited to, the ACT Emergency Services Bureau; and
- (2) either:
 - (a) approve the **Emergency Plan**; or

- (b) require the **Utility** to amend the **Emergency Plan**.

4.3 Amendments to Emergency Plans

The **Chief Executive** may direct a **Utility** to amend a proposed **Emergency Plan** only if, in the **Chief Executive's** reasonable opinion, the proposed plan does not adequately address any one or more of the matters referred to in clause 5.1.

4.4 Utility to Make Proposed Amendments

If the **Chief Executive** directs a **Utility** to amend its proposed **Emergency Plan** under clause 4.3, the **Utility** must in good faith and within 14 days of receipt of the **Chief Executive's** direction prepare and submit a revised plan to the **Chief Executive** for approval.

4.5 Chief Executive Submission of Emergency Plans

As soon as practicable after approving an **Emergency Plan**, the **Chief Executive** must submit the plan to interested parties including, but not limited to, the ACT Emergency Services Bureau.

5. CONTENT OF AN EMERGENCY PLAN

5.1 Emergency Events

- (1) In developing an **Emergency Plan**, **Utilities** must address the following:
 - (a) the various levels of response required according to the seriousness of the **Emergency Event** and the level of resources and expertise needed to deal with the different levels of emergency;
 - (b) the likely or real impact an **Emergency Event** will have on the community;
 - (c) possible cross-industry issues.
- (2) Accordingly, each **Emergency Plan** must, at a minimum:
 - (a) identify:
 - (i) emergency situations;
 - (ii) system failure situations; and
 - (iii) unusual occurrences (for example, industrial action, malicious damage);that, if they occurred:
 - (i) are likely to threaten or adversely affect the provision of a **Utility Service** to a substantial number of **Customers** (ie greater than 10% of **Customers**) or to more than one localised area;
 - (ii) may lead to the declaration of an emergency under the Emergency Management Act.

- (3) detail the **Utility's** procedures for the early detection and identification of the **Emergency Events** identified under subclause 5.1(2)(a); and
- (4) detail the **Utility's** procedures for the **Emergency Events** identified under subclause 5.1(2)(a).

5.2 Emergency Plan not to be Inconsistent

Emergency Plans must take into account the requirements of, and not be inconsistent with:

- (1) any emergency plans developed under the Emergency Management Act; and
- (2) **NEMMCO's** Power System Emergency Management Plan (if applicable).

5.3 Requirement to Ration, Cut-Off or otherwise affect the Provision of a Utility Service

An **Emergency Plan** must detail the manner in which **Utility Services** are to be cut-off, rationed or otherwise regulated in response to an **Emergency Event**.

5.4 Specified Actions

An **Emergency Plan** must outline the actions that a **Utility** will take in response to an **Emergency Event** to:

- (1) minimise the impact, or likely impact, of the event on persons and property; and
- (2) maintain or resume the provision of the relevant **Utility Service**.

5.5 Key Personnel

With respect to each action specified under clause 5.4, an **Emergency Plan** must identify:

- (1) an employee or officer of the **Utility** responsible for ensuring that the action is undertaken;
- (2) the key employee or officer responsible for managing and co-ordinating the **Utility's** overall response to each **Emergency Event**; and
- (3) roles and attendance procedures to be employed by employees and officers during an **Emergency Event**.

5.6 Training

A **Utility** must ensure that its employees and officers understand and have had training on their duties, responsibilities and limitations during an **Emergency Event**.

5.7 Notification

- (1) An **Emergency Plan** must establish guidelines for when the **Minister** is notified about an **Emergency Event** or a potential **Emergency Event**;

- (2) Identify the **Emergency Service Organisations** that the **Utility** is to contact when an **Emergency Event** occurs and have in place a process for contacting those organisations as necessary.

5.8 Communication Strategy

- (1) An **Emergency Plan** must develop a communication strategy to respond to **Emergency Events**.
- (2) The communication strategy must detail:
 - (a) The **Customers**, groups of **Customers** and/or other members of the public most likely to be affected by the occurrence of an **Emergency Event**;
 - (b) A process for notifying those persons identified under subclause 5.8(2)(a) of the occurrence of an **Emergency Event** and specifying:
 - (i) the actions that the **Utility** will take to respond to the Event;
 - (ii) information on the estimated duration of the Event;
 - (iii) the nature of any restrictions;
 - (iv) procedures for making applications for exemptions from restrictions;
 - (v) any appropriate action or precaution those persons should take in the circumstances.
 - (c) a strategy for liaising with the media.
- (3) The **Emergency Plan** must include provisions requiring the establishment of a 24 hour, 7 day a week, emergency telephone number with operators capable of providing information referred to in subclause 5.8(2)(b).

5.9 Effective Emergency Plans

Emergency Plans are to be in writing, simply expressed, properly disseminated and regularly tested and revised.

6. EMERGENCY EVENT REPORTING

6.1 Notification at Time of Emergency Event

Utilities must immediately notify the **Chief Executive** of an **Emergency Event**. The **Chief Executive** must be advised of:

- (1) the status of the event;
- (2) the likely impact of the event;
- (3) steps being taken to address the event.

6.2 Emergency Event Report to Chief Executive

A **Utility** must send a written **Emergency Event Report** to the **Chief Executive** not later than:

- (1) five **Business Days** after the occurrence of an **Emergency Event**; and/or
- (2) five **Business Days** after receiving a request from the **Chief Executive**.

6.3 Content of Emergency Event Report

An **Emergency Event Report** must be in the form required from time to time by the **Chief Executive** and, in the case of an **Emergency Event Report** submitted under clause 6.2(2), must:

- (a) provide details on the cause of the event;
- (b) provide details on the time and date at which the event took place;
- (c) list the requirements contained in the relevant **Emergency Plan**;
- (d) detail the **Utility's** actions under each of those requirements;
- (e) provide notification details;
- (f) detail the current status of the event, including the capacity of the **Utility** to provide **Utility Services** following the occurrence of the **Emergency Event**;
- (g) detail maintenance and other remedial actions to be undertaken by the **Utility** to prevent another such occurrence (if applicable) and to ensure the ongoing capacity of the **Utility** to deliver the relevant **Utility Service**; and
- (h) provide any other details requested by the **Chief Executive**.

6.4 Emergency Events Reports submitted under the Dam Safety Code

An **Emergency Event Report** prepared and submitted to the **Chief Executive** under the **Dam Safety Code** following a dam safety emergency is taken to satisfy the **Emergency Event** reporting requirements under this Code.

6.5 Chief Executive May Give Direction to Utility

If, on the basis of an **Emergency Event Report**, the **Chief Executive** is not satisfied with a **Utility's** adherence to its **Emergency Plan** following an **Emergency Event**, the **Chief Executive** may give a direction to the **Utility**.

7. INSPECTION OF RECORDS

7.1 Each Utility to Keep Records

Each **Utility** must keep, or cause to be kept, comprehensive and accurate records of:

- (1) compliance with the requirements of this Code; and
- (2) any other matters reasonably required by the **Chief Executive**.

8. DUTY OFFICERS

After hours duty officers must be provided with a copy of the **Utility's Emergency Plan** and be familiar with its contents.

9. COMPLIANCE WITH AN EMERGENCY PLAN

9.1 Utility to Comply with Emergency Plan

During an **Emergency Event** a **Utility** must comply with its **Emergency Plan**.

10. CO-OPERATION WITH OTHER UTILITIES

10.1 Utilities may make arrangements for cooperation

A **Utility** may make an arrangement with another **Utility** (including an interstate **Utility**) to facilitate co-operation in the management of an **Emergency Event**. Such an arrangement might include, for example, arrangements for sharing resources during an event should its management exceed the **Utility's** normal operational capabilities.

DICTIONARY

- (1) “**Act**” means the *Utilities Act 2000*;
- (2) “**Business Day**” means a day, other than a Saturday, Sunday or public holiday in the **Territory**;
- (3) “**Chief Executive**” has the same meaning and functions as defined under the **Act**;
- (4) “**Customer**” has the same meaning as defined under the **Act**;
- (5) “**Dam Safety Code**” means the **Dam Safety Code** approved as a technical code by the **Minister** under Part 5 of the **Act**;
- (6) “**Electricity Distributor**” means a **Person** who holds a **Utility Services Licence** for the distribution of electricity;
- (7) “**Emergency Event**” means an incident that threatens, or affects, the supply of **Utility Services** to a significant number of **Customers** and that may lead to the declaration of an emergency under the *Emergency Management Act 1999*;
- (8) “**Emergency Event Report**” means a report prepared in accordance with the **Emergency Planning Code**;
- (9) “**Emergency Plan**” means a plan required under, and developed in accordance with, the **Emergency Planning Code**;
- (10) “**Emergency Planning Code**” means the **Emergency Planning Code** approved by the **Minister** as a **Technical Code** under Part 5 of the **Act**;
- (11) “**Emergency Services Organisations**” include, but are not limited to, the ACT Emergency Services Bureau and the ACT Police;
- (12) “**ICRC**” means the Independent Competition and Regulatory Commission established under section 5 of the *Independent Competition and Regulatory Commission Act 1987 (ACT)*;
- (13) “**Minister**” means the **Minister** responsible for administering Part 5 of the **Act**;
- (14) “**NEMMCO**” means the National Electricity Market Management Company Limited ACN 072 010 327;
- (15) “**Person**” includes a natural person, a firm, an unincorporated association or body corporate;
- (16) “**Technical Code**” means a code approved or determined by the **Minister** under Part 5 of the **Act**;
- (17) “**Territory**” means the Australian Capital Territory;
- (18) “**Utility**” means a **Person** who holds a **Utility Services Licence**;

- (19) **"Utility Services Licence"** means a licence granted to a **Utility** by **ICRC** under Part 3 of the **Act**;
- (20) **"Utility Services"** has the same meaning as defined under the **Act**;
- (21) **"Water Services"** means those services as defined in the **Act**;
- (22) **"Water Utility"** is a **Utility** licensed under the **Act**, to provide **Water Services**.

Gas Safety and Operating Plan Code

December 2000



AUSTRALIAN
CAPITAL TERRITORY

TABLE OF CONTENTS

1	APPLICATION AND PURPOSE OF THIS CODE	1
1.1	Application	1
2	DICTIONARY	1
2.1	Dictionary Attached	1
3	SAFETY AND OPERATING PLAN	1
3.1	Objective	1
3.2	Contents.....	1
3.3	Australian Standards.....	2
4	INITIAL SAFETY AND OPERATING PLAN	2
4.1	Lodgment	2
4.2	Approval	2
4.3	Amendment.....	2
4.4	Implementation.....	2
5	AUDIT OF SAFETY AND OPERATING PLAN	2
5.1	Auditor Nomination.....	2
5.2	Auditor Qualifications	3
5.3	Change to Nominated Auditor.....	3
5.4	Certification	3
5.5	Periodic Audits	3
6	APPROVED SAFETY AND OPERATING PLAN	4
6.1	Location of Safety and Operating Plan	4
6.2	Awareness	4
6.3	Plan Review	4
6.4	Variation	4
6.5	Revision	4
6.6	Compliance	4
	DICTIONARY	5

APPLICATION AND PURPOSE OF THIS CODE

1.1 Application

This Code applies to the operator of a **Gas Transmission Network** or a **Gas Distribution Network** in relation to the transmission and distribution of natural gas.

2 DICTIONARY

2.1 Dictionary Attached

The dictionary at the end of this **Gas Safety and Operating Plan Code** is part of this Code.

3 SAFETY AND OPERATING PLAN

3.1 Objective

The object of a **Safety and Operating Plan** is to ensure the safe operation and maintenance of a **Gas Network** to which it relates and the gas quality standards and gas pressure standards for gas conveyed through the network.

3.2 Contents

A **Safety And Operating Plan** must include (but is not limited to) the following:

- (1) a description of the **Gas Network** and its operation and maintenance, including:
 - (a) references to maps showing the location of the **Gas Network** and the procedures for gaining access to those maps; and
 - (b) a description of the engineering records maintained on the **Gas Network**;
- (2) an analysis consistent with the size and complexity of the **Gas Network**, the applicable standards and codes that:
 - (a) systematically identifies hazardous events that might be expected to happen;
 - (b) identifies the potential causes of those events;
 - (c) states the possible consequences of those events;
 - (d) states the operational, maintenance and organisational safeguards, including a maintenance schedule indicating, among other things, the type and frequency of inspections, coating surveys and checks on cathodic protection devices, intended to prevent hazardous events from happening or, if they happen, intended to protect operating staff, plant, equipment, the community and the environment; and

- (e) includes an analysis of events happening during the construction of a **Gas Network** and the construction of extensions to the existing **Gas Network**.
- (3) the procedures to be implemented if an emergency happens and a statement that those procedures have been tested and proved by the operator of a **Gas Network**.

3.3 Australian Standards

The **Safety and Operating Plan** must not be inconsistent with the relevant Australian Standards. The operator of a **Gas Network** must comply with the relevant Australian Standards.

4 INITIAL SAFETY AND OPERATING PLAN

4.1 Lodgment

An operator of a **Gas Network** must lodge a proposed **Safety and Operating Plan** with the **Chief Executive** within 6 months following the grant of its **Utility Services Licence** or another time approved by the **Chief Executive**.

4.2 Approval

The **Chief Executive** may approve, or refuse to approve, a proposed **Safety and Operating Plan** lodged by an operator of a **Gas Network**.

The **Chief Executive** may refuse to approve the proposed plan if the plan fails to meet a requirement of clause 3.2 of this Code, or if the implementation of the **Safety and Operating Plan** may give rise, or has given rise, to an unsafe situation.

4.3 Amendment

The **Chief Executive** may direct amendment of the proposed **Safety and Operating Plan** relating to particular maintenance or safety aspects of the operation of the **Gas Network**.

4.4 Implementation

An operator of a **Gas Network** must implement and comply with the proposed **Safety and Operating Plan** submitted to the **Chief Executive** until the **Safety and Operating Plan** is approved.

5 AUDIT OF SAFETY AND OPERATING PLAN

5.1 Auditor Nomination

Before an operator of a **Gas Network** gives the **Chief Executive** a proposed plan, the operator of a **Gas Network** must, by written notice to the **Chief Executive**, nominate a person to be the **Gas Network's Auditor** and the **Chief Executive** must have advised the operator of a **Gas Network** that the nomination is acceptable.

5.2 Auditor Qualifications

The operator of a **Gas Network** must include with the nomination the relevant qualifications and experience of the **Auditor**.

The **Auditor** must be independent of the operator of a **Gas Network** and competent to exercise the functions of an **Auditor** for a **Safety and Operating Plan**.

5.3 Change to Nominated Auditor

An operator of a **Gas Network** may, by written notice to the **Chief Executive**, apply to change the nominated **Auditor**. If the **Chief Executive** notifies the operator of a **Gas Network** in writing that a nomination is not accepted, or is no longer acceptable, the nomination ceases to operate and the operator of a **Gas Network** must, by written notice, give the **Chief Executive** a further nomination within 28 days.

5.4 Certification

An operator of a **Gas Network** must ensure the proposed **Safety and Operating Plan** bears a certificate by the **Gas Network's Auditor** prior to submission to the **Chief Executive**. The certificate must certify that:

- (1) the **Safety and Operating Plan** is appropriate having regard to the size and complexity of the network, applicable codes and standards;
- (2) all measures necessary to prevent hazardous events identified in the **Safety and Operating Plan** from happening, and sufficient to protect operating staff, plant, equipment, the community and the environment if they happen, are in place;
- (3) properly trained and equipped people are available to implement the emergency procedures included in the **Safety and Operating Plan**; and
- (4) the certificate must include a summary of the procedures, standards, tests, inspections and maintenance measures in the **Safety and Operating Plan**.

5.5 Periodic Audits

An operator of a **Gas Network** must, within 28 days of the end of the **Year**, give the **Chief Executive**, in respect of the operator of a **Gas Network Safety and Operating Plan**, a report from the **Auditor** certifying whether or not:

- (1) all measures necessary to prevent hazardous events identified in the **Safety and Operating Plan** from happening, and sufficient to protect operating staff, plant, equipment, the community and the environment if they happen, are in place;
- (2) properly trained and equipped people are available to implement the emergency procedures included in the **Safety and Operating Plan**; and

- (3) the plan is adequate and appropriate having regard to any changes in the **Gas Network** since the previous certificate was issued.

6 APPROVED SAFETY AND OPERATING PLAN

6.1 Location of Safety and Operating Plan

- (1) A copy of the **Gas Network's Safety and Operating Plan** is to be kept at a nominated place in the Australian Capital Territory.
- (2) An operator of a **Gas Network** must, on giving the proposed **Safety and Operating Plan** to the **Chief Executive**, notify the **Chief Executive** in writing of the nominated place.

6.2 Awareness

The provisions of the **Safety and Operating Plan** are to be brought to the attention of persons likely to be involved in the implementation of the **Safety and Operating Plan** including, but not limited to, ACT Emergency Services and other **Utilities**.

6.3 Plan Review

An operator of a **Gas Network** must review the **Safety and Operating Plan** on a regular basis.

6.4 Variation

The **Chief Executive** may approve a variation of an approved **Safety and Operating Plan** submitted in writing by the operator of a **Gas Network**.

6.5 Revision

The **Chief Executive** may, in writing, direct the operator of a **Gas Network** to revise its approved **Safety and Operating Plan** or a part of the **Safety and Operating Plan**.

The operator of a **Gas Network** must revise the **Safety and Operating Plan** in accordance with the **Chief Executive's** written direction.

6.6 Compliance

The operator of a **Gas Network** must implement and comply with the approved **Safety and Operating Plan**.

DICTIONARY

- (1) “**Act**” means the *Utilities Act 2000*;
- (2) “**Auditor**” means an **Auditor** nominated by the operator of a **Gas Network** and accepted by the **Chief Executive**;
- (3) “**Chief Executive**” has the same meaning as in the **Act**;
- (4) “**Gas Distribution Network**” has the same meaning as in the **Act**;
- (5) “**Gas Network**” means a **Gas Distribution Network** or a **Gas Transmission Network**;
- (6) “**Gas Safety and Operating Plan Code**” means the **Gas Safety and Operating Plan Code** approved by the **Minister** as a **Technical Code** under the **Act**;
- (7) “**Gas Transmission Network**” has the same meaning as in the **Act**;
- (8) “**ICRC**” means the Independent Competition and Regulatory Commission established under section 5 of the *Independent Competition and Regulatory Commission Act 1997*;
- (9) “**Minister**” means the **Minister** responsible for administering Part 4 of the **Act**;
- (10) “**Safety and Operating Plan**” means a **Safety and Operating Plan** adopted by an operator of a **Gas Network** in accordance with the Safety and Operating Plan Code;
- (11) “**Technical Code**” means a code approved or determined by the **Minister** under Part 5 of the **Act**;
- (12) “**Utility**” has the same meaning as in the **Act**;
- (13) “**Utility Services Licence**” means a licence granted to a **Utility** by **ICRC** under the **Act**;
- (14) “**Year**” has the same meaning as in the **Act**.

Gas General Metering Code

December 2000



AUSTRALIAN
CAPITAL TERRITORY

TABLE OF CONTENTS

1	APPLICATION AND PURPOSE OF THIS CODE	1
1.1	Application	1
1.2	Purpose.....	1
2	DICTIONARY	1
2.1	Dictionary Attached.....	1
3	EFFECT OF CODE	1
3.1	Code Not to be Taken to Limit Alternative Arrangements.....	1
4	INSTALLATION OF METERING EQUIPMENT	1
4.1	Gas Supplier to Ensure the Installation of Metering Equipment.....	1
5	SUPPLY OF METERING EQUIPMENT	1
5.1	Gas Distributor to Supply Metering Equipment.....	1
5.2	Standard of Metering Equipment	2
5.3	New Metering Equipment.....	2
5.4	Accuracy Standards.....	2
6	COST OF SUPPLY OF METERING EQUIPMENT	2
6.1	Cost of Supply of Metering Equipment.....	2
7	OWNERSHIP OF METERING EQUIPMENT	3
7.1	Ownership of Metering Equipment.....	3
8	INSTALLATION OF METERING EQUIPMENT	3
8.1	Provisions of Standard Customer Contract.....	3
8.2	Procedures for Installation	3
8.3	Additional Purposes	3
9	MAINTENANCE AND REPLACEMENT OF METERING EQUIPMENT	4
9.1	Maintenance of Metering Equipment	4
9.2	Unauthorised Interference.....	4
9.3	Customer Must Notify Gas Distributor of Damage Etc.....	4
9.4	Gas Distributor to Repair Metering Equipment	4
9.5	Cost of Repairs	5
10	ACCESS TO METERING EQUIPMENT	5
10.1	Customer’s Obligations and Cost of Access.....	5
11	READING OF METERING EQUIPMENT	5
11.1	Frequency of Metering Equipment Readings.....	5
11.2	Check Readings at Request of Customer.....	5
12	TESTING OF METERING EQUIPMENT	6
12.1	Gas Distributor May Test Metering Equipment	6
12.2	Approval of Meter Testing Procedures.....	6
12.3	Customer May Request Test	6
12.4	When Metering Equipment is Defective	7
12.5	Technical Standards	7
12.6	Meter Testing Equipment.....	7
13	ADJUSTMENTS TO CUSTOMER ACCOUNTS	7
13.1	Mandatory Standard Customer Contract Provisions.....	7

13.2 Optional Standard Customer Contract Provisions	7
14 METERING INFORMATION.....	8
14.1 Gas Distributor to Retain Metering Information.....	8
14.2 Mandatory Standard Customer Contract Provisions.....	8
DICTIONARY	9

1 APPLICATION AND PURPOSE OF THIS CODE

1.1 Application

This Code applies to **Gas Distributors** and **Gas Suppliers**.

1.2 Purpose

The purpose of this Code is to set out those matters that relate to gas metering and with which:

- (1) each **Gas Distributor** must comply in providing **Gas Connection Services to Customers**; and
- (2) each **Gas Supplier** must comply in providing **Gas Supply Services to Customers**.

2 DICTIONARY

2.1 Dictionary Attached

The dictionary at the end of this **Gas General Metering Code** is part of this Code.

3 EFFECT OF CODE

3.1 Code Not to be Taken to Limit Alternative Arrangements

Nothing in this Code is to be taken to prevent:

- (1) a **Gas Distributor** or a **Gas Supplier** (as the case may be) and a **Customer** agreeing upon a means of measuring and recording the consumption of gas on the **Premises** of the **Customer** otherwise than as prescribed under this Code; or
- (2) a **Gas Supplier** including provisions in its **Standard Customer Contract** that are more advantageous to **Franchise Customers**, or give additional rights to **Franchise Customers**, than are prescribed under this Code.

4 INSTALLATION OF METERING EQUIPMENT

4.1 Gas Supplier to Ensure the Installation of Metering Equipment

A **Gas Supplier** may require the installation of **Metering Equipment** to measure and record the consumption of gas on the **Premises** of the **Customer** as a precondition to its obligation to supply gas to a **Customer**.

5 SUPPLY OF METERING EQUIPMENT

5.1 Gas Distributor to Supply Metering Equipment

Subject to the provisions of this Code, a **Gas Distributor** must supply **Metering Equipment** to a **Gas Supplier's Customers**.

5.2 Standard of Metering Equipment

Metering Equipment supplied by a **Gas Distributor** under clause 5.1 must:

- (1) be capable of measuring and recording the consumption of gas supplied to the **Premises** of the **Customer**;
- (2) be sealed or have other appropriate protective devices to prevent or detect interference with the **Metering Equipment**;
- (3) be sealed and stamped in a method approved by the **Chief Executive**; and
- (4) comply with the **Technical Standards**.

5.3 New Metering Equipment

All **New Metering Equipment** specified by a **Gas Distributor** must comply with the following:

- (1) a **Gas Distributor** must not adopt new models or types of **Metering Equipment** if the equipment has not been tested for compliance with the accuracy standards of this Code;
- (2) new models or types of **Metering Equipment** must be tested in a laboratory accredited for testing energy measuring equipment to the accuracy standards of this Code; and
- (3) a **Gas Distributor** must keep records of tests performed while **Metering Equipment** of that type remain in service, or for a minimum of 7 years, whichever is the longer period.

5.4 Accuracy Standards

A **Gas Distributor** must ensure that **New Metering Equipment** meets the accuracy standards as approved by the **Chief Executive** from time to time.

6 COST OF SUPPLY OF METERING EQUIPMENT

6.1 Cost of Supply of Metering Equipment

A **Gas Supplier** must arrange the provision of **Metering Equipment** to **Franchise Customers** at no direct cost to the **Franchise Customer**.

Nothing in this clause affects:

- (1) the ability of the **Gas Supplier** to recover from a **Franchise Customer** any amount payable by the **Gas Supplier** to a **Gas Distributor** in respect of **Metering Equipment**, or
- (2) the ability of the **Gas Supplier** to seek, or the **ICRC** to provide for, recovery of these costs from the **Franchise Customer** as part of any price direction by

the ICRC under the Independent Pricing and Regulatory Commission Act 1997.

7 OWNERSHIP OF METERING EQUIPMENT

7.1 Ownership of Metering Equipment

A **Gas Distributor** may require a **Gas Supplier** to include provisions in its **Standard Customer Contract** to the effect that:

- (1) the **Gas Supplier** and the **Customer** agree that **Metering Equipment** supplied by the **Gas Distributor** is not a fixture and is, and remains, the property of the **Gas Distributor**; and
- (2) the **Customer** must not deal, or purport to deal, with **Metering Equipment** supplied by the **Gas Distributor** in any way that is, or may be, contrary to the ownership or proprietary interests of the **Gas Distributor**.

8 INSTALLATION OF METERING EQUIPMENT

8.1 Provisions of Standard Customer Contract

The provisions of a **Gas Supplier's Standard Customer Contract**:

- (1) may require the **Customer** to pay the **Cost** of installing **Metering Equipment**; and
- (2) may require that **Metering Equipment** be installed in accordance with the **Service and Installation Rules**.

8.2 Procedures for Installation

- (1) Each **Gas Distributor** must have procedures for the installation of **Metering Equipment**. The procedures should include:
 - (a) technical;
 - (b) installation;
 - (c) asset management;
 - (d) maintenance;
 - (e) training; and
 - (f) life cycle requirements.

8.3 Additional Purposes

Metering Equipment may be used for purposes in addition to billing:

- (1) such joint use must not compromise the requirements of this Code; and
- (2) the **Gas Distributor** must co-ordinate the different uses of the **Metering Equipment**.

9 MAINTENANCE AND REPLACEMENT OF METERING EQUIPMENT

9.1 Maintenance of Metering Equipment

A **Gas Distributor** must:

- (1) maintain installed **Metering Equipment**;
- (2) develop and maintain a maintenance plan for **Metering Equipment** covered by this Code, taking account of:
 - (a) the size of the **Customer** load metered;
 - (b) the age of the installed **Metering Equipment**; and
 - (c) the quantity and distribution of the installed **Metering Equipment**;
- (3) if so requested, inform **Gas Suppliers** or **Customers** of the details of the maintenance plan.

9.2 Unauthorised Interference

A **Gas Distributor** must use reasonable endeavours, and may request a **Gas Supplier** to include provisions in its **Standard Customer Contract**, that require the **Customer** to use reasonable endeavours to protect **Metering Equipment** from unauthorised interference.

9.3 Customer Must Notify Gas Distributor of Damage Etc.

A **Gas Distributor** may require a **Gas Supplier** to include provisions in its **Standard Customer Contract** that require the **Customer** to notify the **Gas Supplier** of any interference or defect with, or damage to, **Metering Equipment** installed on the **Customer's Premises** within 5 **Business Days** of the **Customer** becoming aware of any such interference, defect or damage.

A **Gas Supplier** must notify a **Gas Distributor** of any interference or defect with, or damage to, **Metering Equipment** installed on the **Customer's Premises** on the next **Business Day** of the **Supplier** becoming aware of any such interference, defect or damage.

9.4 Gas Distributor to Repair Metering Equipment

A **Gas Distributor** must:

- (1) repair or replace any defective or damaged **Metering Equipment** installed on a **Customer's Premises**, and
- (2) replace any broken seal on the **Metering Equipment**,

as soon as reasonably practicable after the **Gas Distributor** is notified of, or becomes aware of, the defect, damage or broken seal.

9.5 Cost of Repairs

A **Gas Supplier** may include provisions in its **Standard Customer Contract** to the effect that if:

- (1) any defect or damage to **Metering Equipment** installed on the **Customer's Premises** was caused by the **Customer**; or
- (2) any seals on that **Metering Equipment** were broken or damaged by the **Customer**,

the **Gas Supplier** may require the **Customer** to pay the reasonable costs of repair or replacement of that **Metering Equipment** or the seal.

10 ACCESS TO METERING EQUIPMENT

10.1 Customer's Obligations and Cost of Access

A **Gas Distributor** may require a **Gas Supplier** to include provisions in its **Standard Customer Contract** that:

- (1) require the **Customer** to ensure that the **Gas Distributor** or **Gas Supplier** has unhindered access to the **Metering Equipment** installed on the **Customer's Premises** to read, test, replace and/or repair that equipment; and
- (2) if a **Customer** hinders the **Gas Distributor's** or **Gas Supplier's** access to **Metering Equipment** installed on the **Customer's Premises**, the **Gas Distributor** or **Gas Supplier** is entitled to the reasonable **Cost** of any further attendances at the **Customer's Premises** to read, test, replace and/or repair that equipment.

11 READING OF METERING EQUIPMENT

11.1 Frequency of Metering Equipment Readings

A **Gas Distributor** must read **Metering Equipment** in accordance with the transport agreement under the Canberra Distribution Network Access Arrangement, or more frequently, as agreed with **Gas Suppliers** so that **Gas Suppliers** can properly discharge their obligations under the **Consumer Protection Code** with respect to **Customer Accounts**.

11.2 Check Readings at Request of Customer

A **Gas Supplier** must include provisions in its **Standard Customer Contract** that:

- (1) allow the **Customer** to require the **Gas Supplier** to carry out a check reading to check the accuracy of a reading given by **Metering Equipment** installed on the **Customer's Premises**;
- (2) allow the **Customer** to only exercise this right once, at no cost, during each **Account Period**; and
- (3) allow the **Customer** to request additional readings at the **Customer's Cost**.

12 TESTING OF METERING EQUIPMENT

12.1 Gas Distributor May Test Metering Equipment

A **Gas Distributor** may test any **Metering Equipment** at any time. The testing of meters may be carried out on or off site.

12.2 Approval of Meter Testing Procedures

A **Gas Distributor** is to submit **Meter Testing Procedures** to the **Chief Executive** for approval.

12.3 Customer May Request Test

A **Gas Supplier** must include provisions in its **Standard Customer Contract** that:

- (1) allow the **Customer** to request either the **Gas Supplier** or a person authorised by the **Chief Executive** to test the **Metering Equipment** installed on the **Customer's Premises** to ascertain whether that equipment is defective;
- (2) require the test of the **Metering Equipment** to be carried out within 15 **Business Days**;
- (3) give the **Customer**, the **Gas Distributor** and the **Gas Supplier** the right to be present at any test of **Metering Equipment** installed on the **Customer's Premises**; and
- (4) require the **Gas Supplier** to pay the **Costs** of testing **Metering Equipment** unless:
 - (a) the **Customer** requests that **Metering Equipment** installed on the **Customer's Premises** be tested; and
 - (b) the test shows that the **Metering Equipment** is not defective,

in which case the **Customer** must pay the **Cost** of the test.

12.4 When Metering Equipment is Defective

For the purposes of this Code, **Metering Equipment** is defective if it does not measure and record the consumption of gas that meets the accuracy standards as approved by the **Chief Executive** from time to time.

12.5 Technical Standards

A **Gas Distributor** must test **Metering Equipment** in accordance with **Technical Standards** as approved by the **Chief Executive** from time to time.

12.6 Meter Testing Equipment

Meter Testing Equipment is to be tested and calibrated every 12 months in accordance with standards approved by the **Chief Executive** from time to time.

13 ADJUSTMENTS TO CUSTOMER ACCOUNTS

13.1 Mandatory Standard Customer Contract Provisions

A **Gas Supplier** must include provisions in its **Standard Customer Contract** that require the **Gas Supplier** to adjust a **Customer Account** if:

- (1) the **Metering Equipment** installed on the **Customer's Premises** is defective; or
- (2) a check reading shows that any reading is incorrect.

13.2 Optional Standard Customer Contract Provisions

A **Gas Supplier** may include provisions in its **Standard Customer Contract** that allow the **Gas Supplier** to make a reasonable estimate of the demand for gas or the quantity of gas supplied to the **Customer's Premises** for the relevant period:

- (1) where the **Metering Equipment** installed on the **Customer's Premises** cannot be read; or
- (2) where a **Meter** is not installed on the **Customer's Premises**; or
- (3) where the demand for gas or the quantity of gas supplied was not registered or was wrongly registered for any period before the date upon which the **Gas Supplier** becomes aware that:
 - (a) **Metering Equipment** installed on the **Customer's Premises** is not working at all;
 - (b) **Metering Equipment** installed on the **Customer's Premises** is not properly registering the quantity of gas used, or the demand for gas, in the **Customer's Premises**; or

- (c) gas has been supplied without passing through **Metering Equipment**;
or
- (d) for any reason, metering data is unavailable; or
- (4) where there is substantiated evidence of fraud;

and subsequently, charge the **Customer** for supplying the quantity of gas, or the demand, so estimated.

14 METERING INFORMATION

14.1 Gas Distributor to Retain Metering Information

A **Gas Distributor** must retain **Metering Information** for at least 12 months from the date of the reading.

14.2 Mandatory Standard Customer Contract Provisions

A **Gas Supplier** must include provisions in its **Standard Customer Contract** that:

- (1) the provisions of the **Consumer Protection Code** with respect to disclosure of **Customer Information** by a **Utility** apply to **Metering Information**;
- (2) require the **Gas Supplier** to use reasonable endeavours to prevent unauthorised access to **Metering Information**;
- (3) require the **Gas Supplier**, at the request of the **Customer**, to provide the **Customer** with all **Metering Information** held by the **Gas Supplier** that concerns the **Customer**; and
- (4) require the **Customer** to pay the **Gas Supplier's** reasonable **Cost** of providing **Metering Information** requested under subclause 14.2(3) unless the **Metering Information** relates to the last **Account Period** in which case the **Gas Supplier** may not charge the **Customer** for the provision of that **Metering Information**.

DICTIONARY

- (1) “**Account Period**” has the same meaning as in the **Consumer Protection Code**;
- (2) “**Act**” means the *Utilities Act 2000*;
- (3) “**Business Day**” means a day, other than a Saturday, Sunday or public holiday in the Australian Capital Territory;
- (4) “**Chief Executive**” has the same meaning and functions as defined under the **Act**;
- (5) “**Consumer Protection Code**” means the **Consumer Protection Code** approved by **ICRC** as an **Industry Code**;
- (6) “**Cost**” includes any cost, charge, expense, outgoing, payment or other expenditure of any nature whatever, including where appropriate all reasonable and proper legal fees;
- (7) “**Customer**” has the same meaning as in the **Act**;
- (8) “**Customer Account**” means an account sent by a utility to a **Customer** in accordance with the requirements of the **Consumer Protection Code**;
- (9) “**Franchise Customer**” means a **Person** who is a **Franchise Customer** of a **Gas Supplier** for the purposes of the **Act**;
- (10) “**Gas Connection Services**” means the pipework connecting a distribution pipeline operated by a **Gas Distributor** to the inlet of a gas **Meter**;
- (11) “**Gas Distributor**” has the same meaning as in the **Act**;
- (12) “**Gas General Metering Code**” means the **Gas General Metering Code** approved by the **Minister** as a **Technical Code** under the **Act**;
- (13) “**Gas Network**” has the same meaning as in the **Act**;
- (14) “**Gas Safety and Operating Plan Code**” means the **Gas Safety and Operating Plan Code** approved by the **Minister** as a **Technical Code** under the **Act**;
- (15) “**Gas Supplier**” means a **Person** who holds a **Utility Services Licence** for the supply of gas;
- (16) “**Gas Supply Services**” means the supply of gas from a gas network;

- (17) “**ICRC**” means the Independent Competition and Regulatory Commission established under section 5 of the *Independent Competition and Regulatory Commission Act 1997*;
- (18) “**Industry Code**” means a code approved or determined by **ICRC** under Part 4 of the **Act**;
- (19) “**Law**” means any statute, rule, regulation, proclamation, order, ordinance or by-law whether present or future and whether Federal, State, territorial or local (in this subsection referred to as a “Statutory Provision”) and includes:
- (a) any statute, regulation, rule, proclamation, order, ordinance or by-law enacted in replacement of that Statutory Provision; and
 - (b) any such Statutory Provision as amended or re-enacted from time to time
- (20) “**Meter**” means a device or other apparatus used for measuring and recording the consumption of gas;
- (21) “**Meter Testing Equipment**” means equipment used for the testing of **Metering Equipment**;
- (22) “**Meter Testing Procedures**” are procedures to test the accuracy of **Meters** approved by the **Chief Executive**;
- (23) “**Metering Equipment**” means equipment necessary for measuring and recording the consumption of gas and includes the **Meter**, valves, pipework, fittings, filters, regulators, over pressure protection devices, non-return valves meter bar and supports;
- (24) “**Metering Information**” means measurements and recordings taken by **Metering Equipment**;
- (25) “**Minister**” means the **Minister** responsible for administering Part 4 of the **Act**;
- (26) “**New Metering Equipment**” means **Metering Equipment** installed on, or after, 1 July 2001;
- (27) “**Non-Franchise Customer**” means a **Person** who is a **Non-Franchise Customer** of a **Gas Supplier** for the purposes of the **Act**;
- (28) “**Person**” includes a natural **Person**, a firm, an unincorporated association or a body corporate;
- (29) “**Premises**” has the same meaning as in the **Act**;
- (30) “**Safety and Operating Plan**” means a **Safety and Operating Plan** adopted by an operator of a **Gas Network** in accordance with the **Safety and Operating Plan Code**;

- (31) “**Service and Installation Rules**” means **Service and Installation Rules** adopted by a **Gas Distributor** in accordance with the **Gas Distributor’s Safety and Operating Plan**;
- (32) “**Standard Customer Contract**” means a contract that is a **Standard Customer Contract** for the purposes of Part 6 of the **Act**;
- (33) “**Technical Code**” means a code approved or determined by the **Minister** under Part 5 of the **Act**;
- (34) “**Technical Standards**” means the requirements with respect to the accuracy of **Metering Equipment** applicable under any **Law** and, to the extent that they are not inconsistent with any applicable **Law**;
- (35) “**Utility**” means a **Person** who holds a **Utility Services Licence**.
- (36) “**Utility Service**” has the same meaning as in the **Act**;
- (37) “**Utility Services Licence**” means a licence granted to a **Utility** by **ICRC** under the **Act**.