
Electrical
Regulatory
Authorities
Council

Electrical Incident Data

Australia & New Zealand 2004 - 05

Definitions

<i>“Customer’s Installation”</i>	means all parts of an electrical installation past the point of supply on the consumer side.
<i>“Distribution or Supply Equipment”</i>	means equipment used in the generation, transmission, supply or distribution of electricity.
<i>“Electrical Worker”</i>	means a person who carries out electrical work and is licensed or authorised to do so.
<i>“General Public”</i>	means a person who is not doing any work as part of his or her employment or under a contract of work or training at the time the incident occurs
<i>“Misuse/Interference”</i>	means to damage, mishandle or use equipment in a way that it is not intended or for what it is designed.
<i>“Non Electrical Worker”</i>	means a person who is in the process of carrying out their occupation and is not an electrical worker.
<i>“Serious Electrical Incident”</i>	is an incident involving electricity which causes -- (a) the death of or injury to a person; or (b) significant damage to property; or (c) a serious risk to public safety
<i>“Serious risk to public safety”</i>	includes - <ul style="list-style-type: none">• property damage that may directly or indirectly cause personal injury or significant damage to property• property damage by high voltage injection or direct current voltage injection• incident serious enough to warrant on site action to mitigate risk to the public by Police, Ambulance Service, Fire Authority, Emergency Service Authority, WorkCover Authority or a safety statutory body• reverse polarity of an electrical circuit that has been in service or declared to be in service (eg. after a working crew left the site)
<i>“significant damage to property”</i>	includes – <ul style="list-style-type: none">• fire damage > 0.3 hectares• any live stock loss• > \$5000 damage to property other than network assets. (This excludes damage to vehicles as a result of

collision with network assets without electricity going astray)

- damage that has potential for significant media interest
- damage serious enough to warrant on site action to mitigate risk to the public by Police, Ambulance Service, Fire Authorities, WorkCover Authority, or an emergency service provider

“Supply Industry Worker”

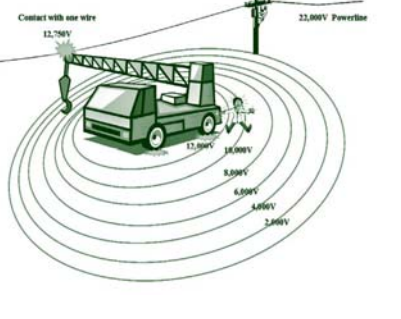




means a person who is employed by a network operator.

“Work Practice”

means the process or method by which work is carried out.

QUICK FACTS 2004-05

34 deaths were recorded in Australia and New Zealand. This is equivalent to 1.39 death per million population.

	<p>All 9 distribution network related deaths were as a result of accidental contact with electricity supply overhead conductors</p>
	<p>25 deaths involved customer's installations, appliances or equipment</p>
	<p>Of the people who got electrocuted, 75% had no formal electrical training</p>
	<p>94% of the number of deaths associated with the electricity supply network from 2000 to 2005 involved overhead conductors</p>
	<p>Serious electrical incidents are three times more likely to be reported at a work place</p>

Electrical Incident Data

This report covers the 12 month period from 1 July 2004 to 30 June 2005. It is based on details of incidents reported to electrical safety regulators in Australia and New Zealand.

Because of difference in reporting definitions and reporting requirements, this comparative report concerns fatalities only.

Out of 34 fatalities (excluding suicides) reported in the financial year, 9 fatalities (27%) involved the electricity supply networks while 25 (73%) involved customer's installations, appliances or equipment. All 9 fatalities involving electricity supply networks were associated with energised overhead conductors.

The number of fatal accidents has fluctuated over the past few years with an increase of 70% in the year 2004-05 following a 43% decrease in the year 2003-04.

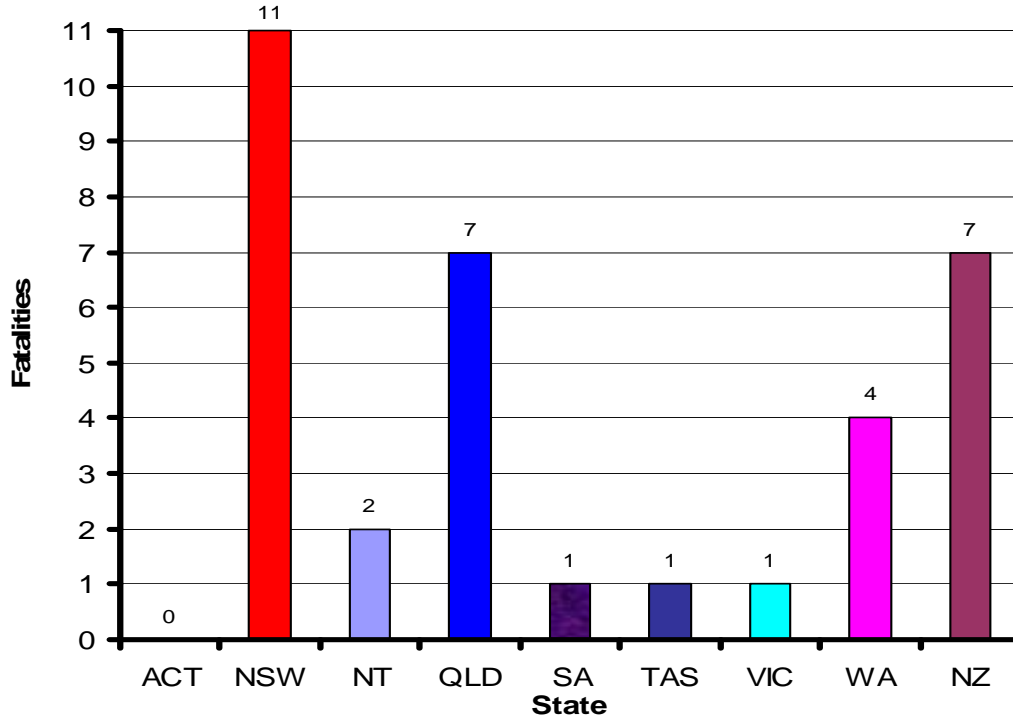
The statistics from 2000-01 to 2004-05 continue to show that most electrical fatalities associated with electricity networks are as a result of working on or near energised overhead conductors. 94.1% of electrical fatalities associated with electricity supply networks involve overhead conductors (out of 51 fatalities involving the electricity supply networks over the last five year period, 48 were due to contact with overhead conductors).

Through this period, the statistical data continues to show that a serious electrical incident is three times more likely to occur in a work place environment.

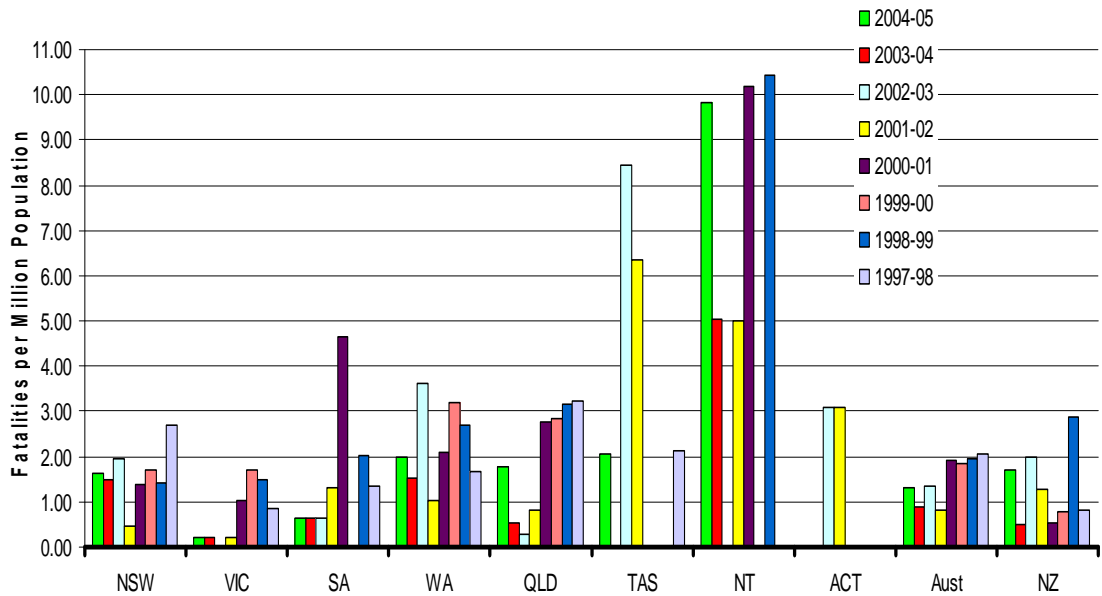
This report presents the information in a series of charts and tables.

1. Regional Fatalities 2004-05

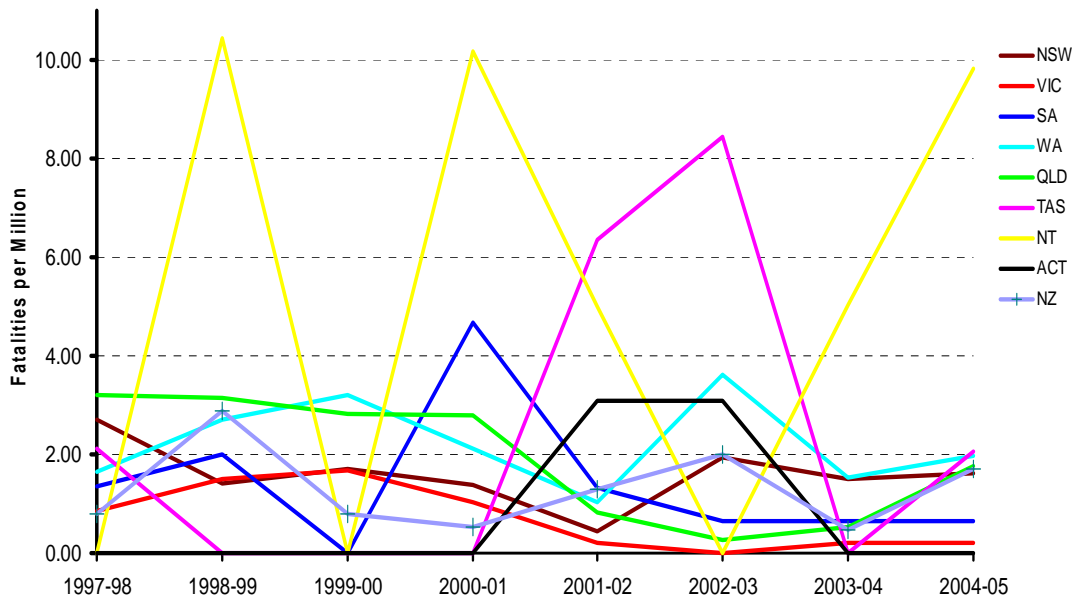
GRAPH 1.1 Australian & NZ Electrical Fatalities 2004-05



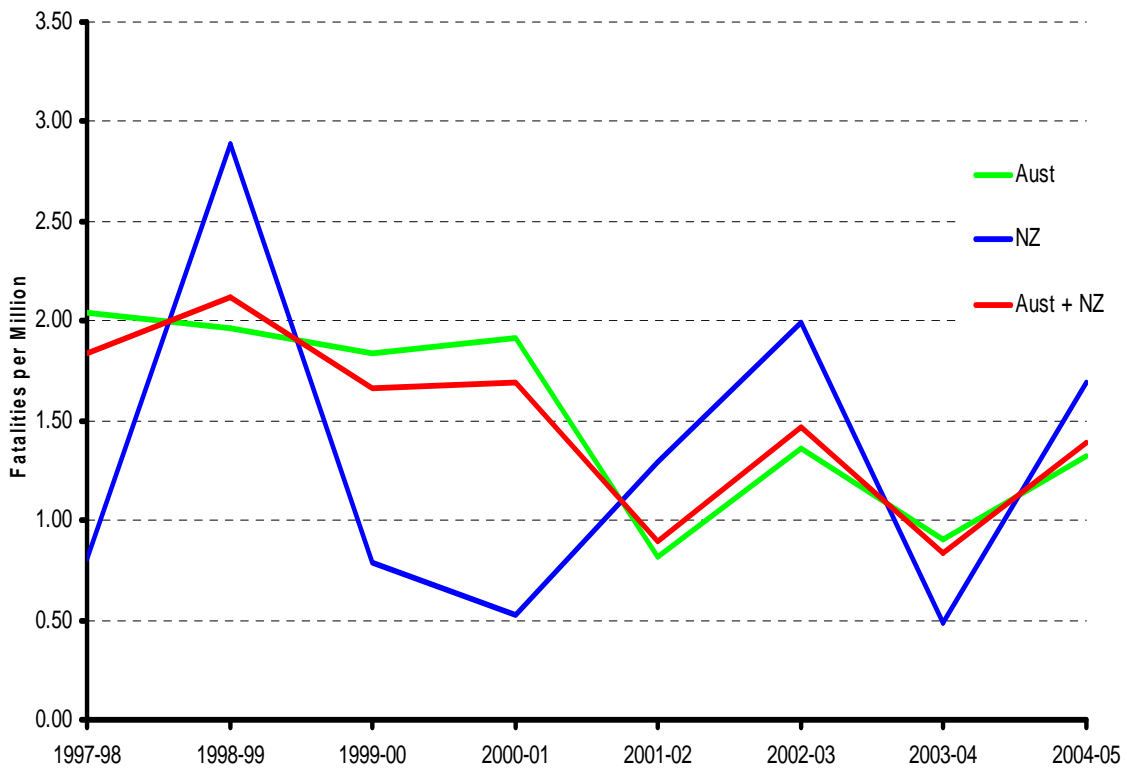
GRAPH 1.2 Electrical Fatalities per Million Persons 2004-05



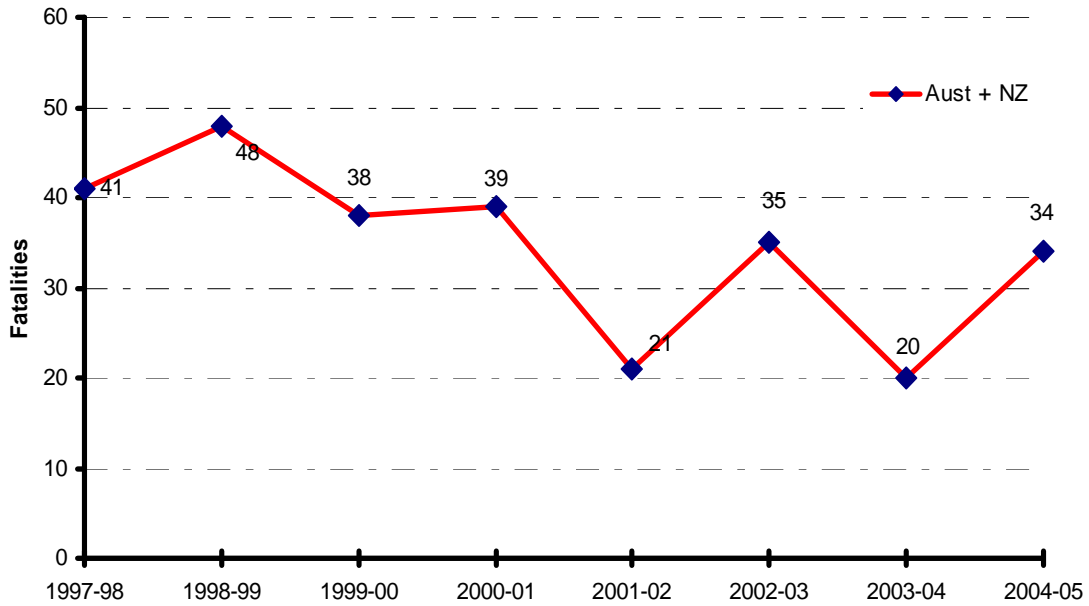
GRAPH 1.3 Regional Trend per Million Persons



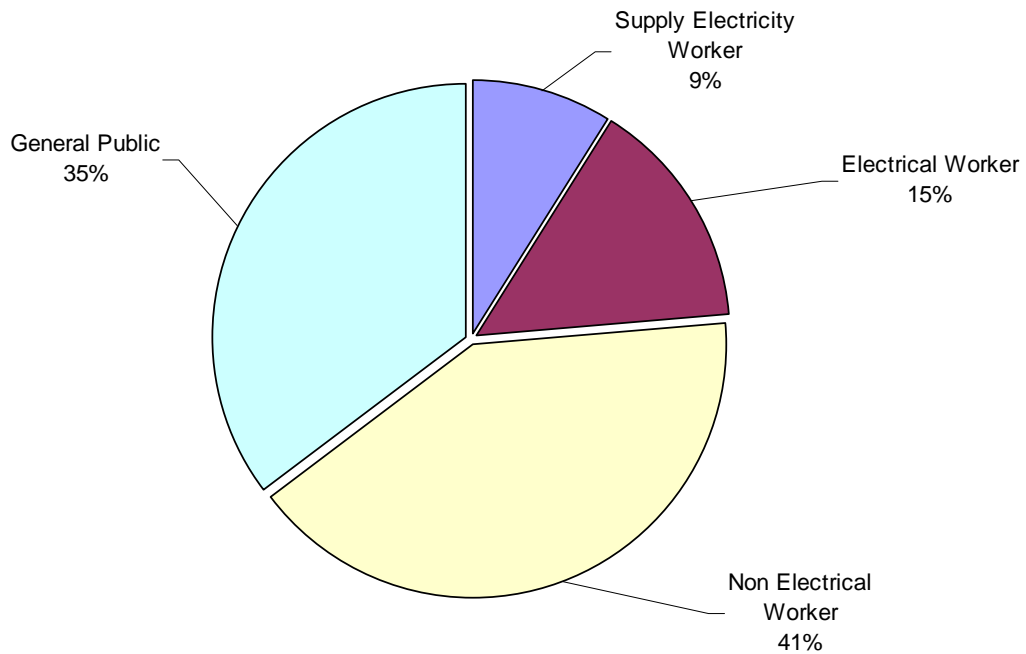
GRAPH 1.4 Trend per Million Australians and New Zealanders



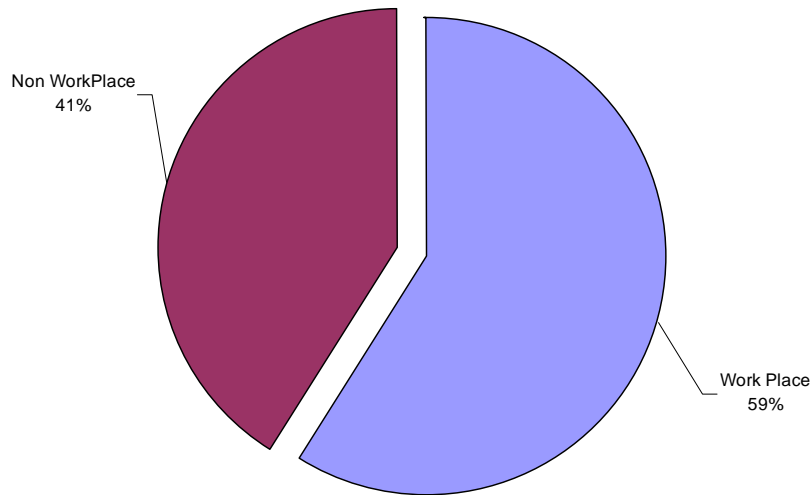
GRAPH 1.5 Total Number of Fatalities in Aust + NZ



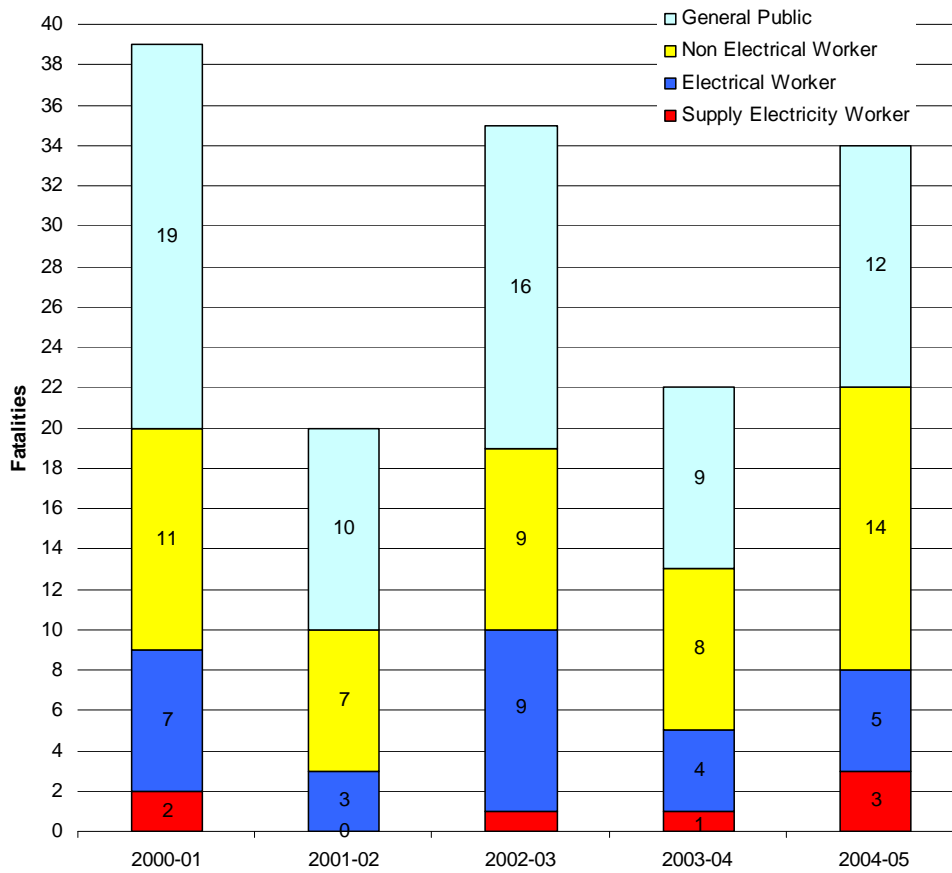
GRAPH 1.6 Aust & NZ Fatalities Victim Categories 2004-05



GRAPH 1.7 Electrical Fatalities Work Related Versus General Public 2004-05

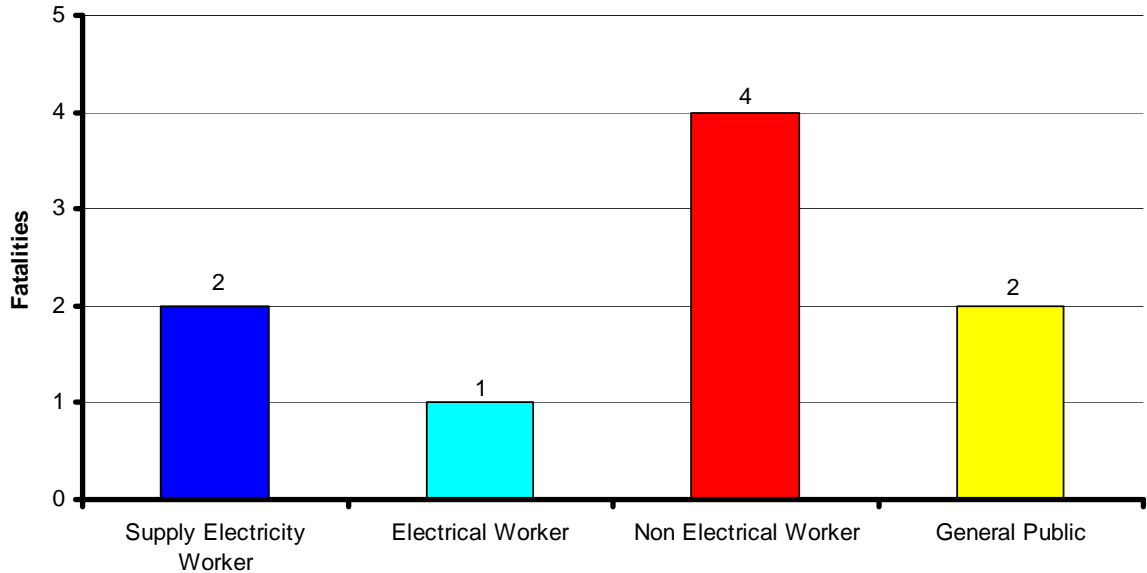


GRAPH 1.8 Electrical Fatalities Victim Categories 2000 - 2005



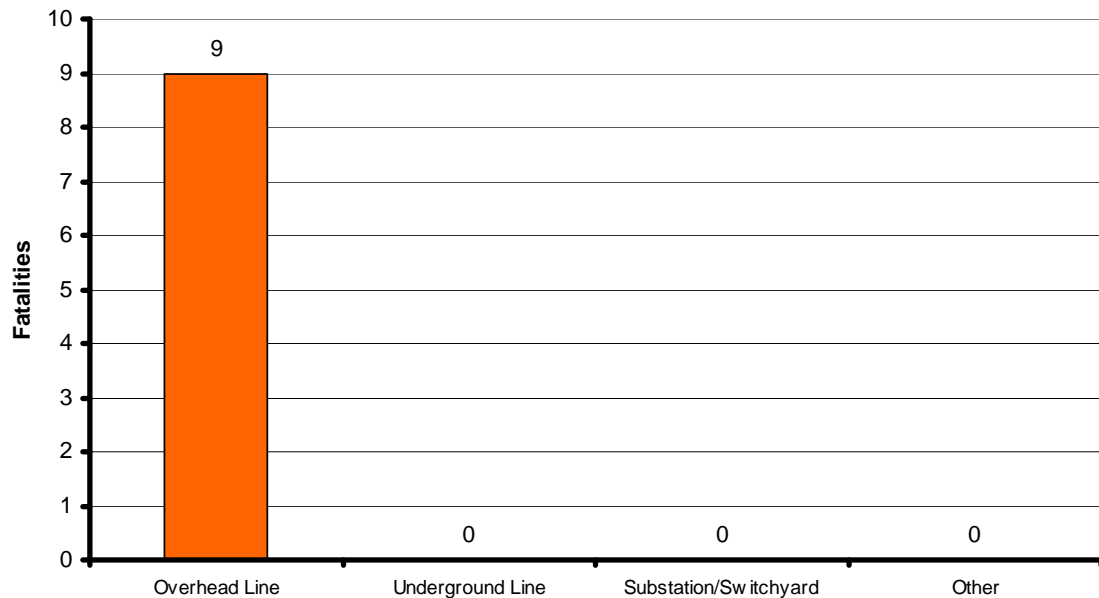
2. Fatalities involving Network Assets

GRAPH 2.1 Fatalities Involving Electricity Supply Assets 2004-05 sorted by Victim category

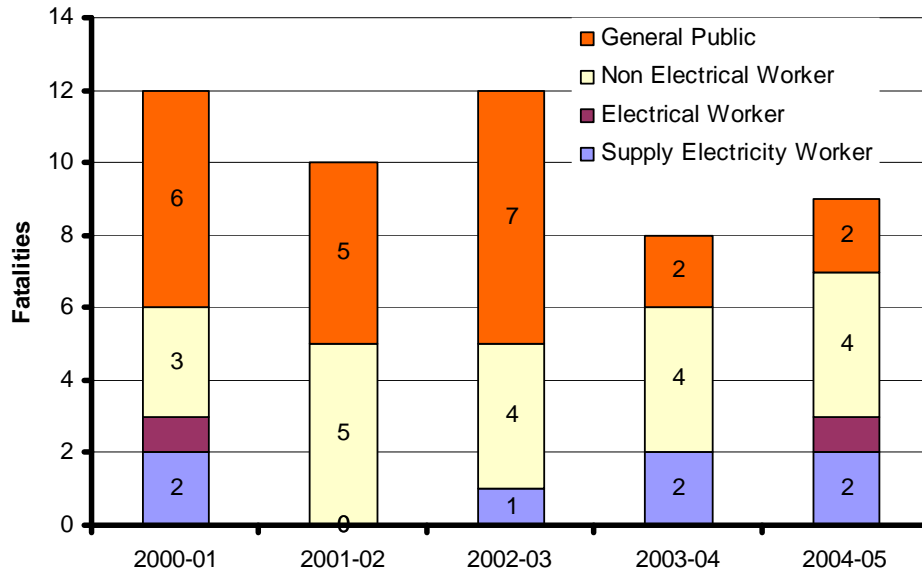


NB. Persons with no electrical training are twice more likely to be electrocuted from electricity network assets.

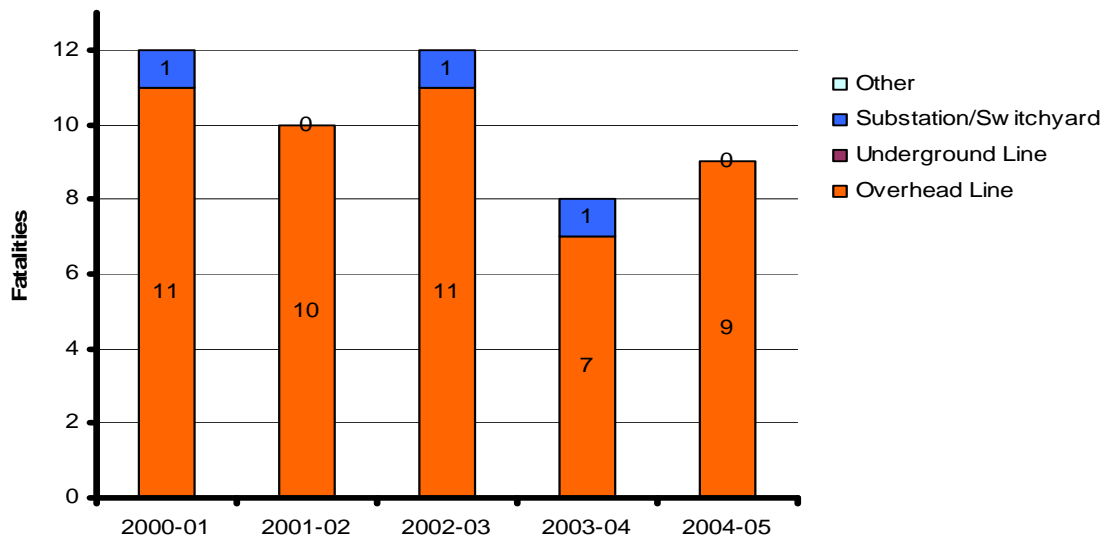
GRAPH 2.2 Fatalities Involving Electricity Supply Assets 2004-05 Sorted by Asset Types



GRAPH 2.3 Fatalities Involving Electricity Supply Assets from 2000 to 2005 Sorted by Victim's Categories

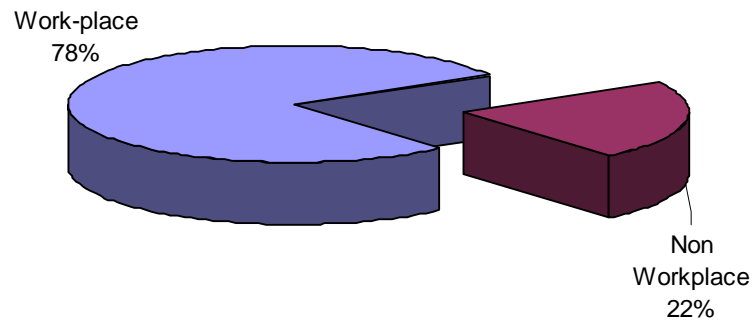


GRAPH 2.4 Fatalities Involving Electricity Supply Assets from 2000 to 2005 Sorted by Asset Types



NB. 94% of fatalities associated with Network Assets over 5 years from 2000 to 2005 involved overhead conductors.

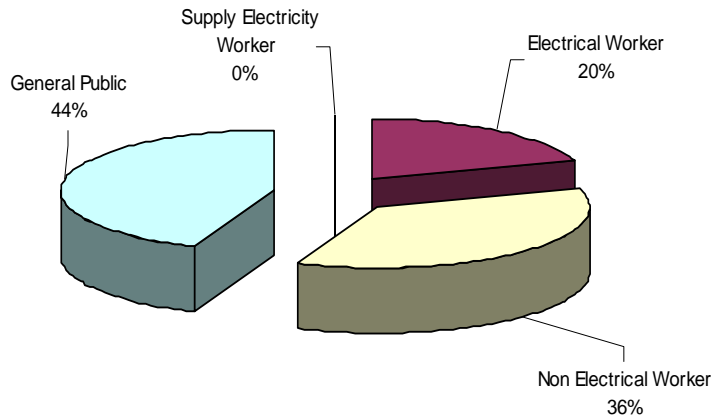
GRAPH 2.5 Fatalities Involving Electricity Supply Assets from 2000 to 2005



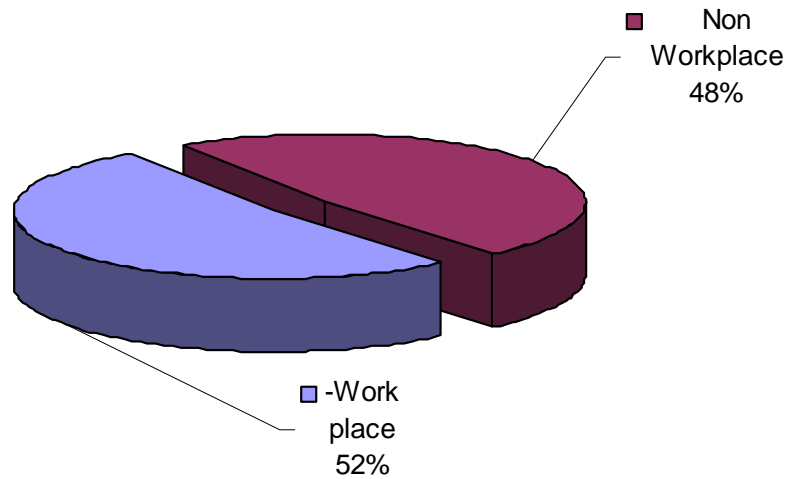
NB. A fatality associated with electricity supply asset is three times more likely to be reported in a work place environment.

3. Fatalities involving Consumer Installation and Equipment.

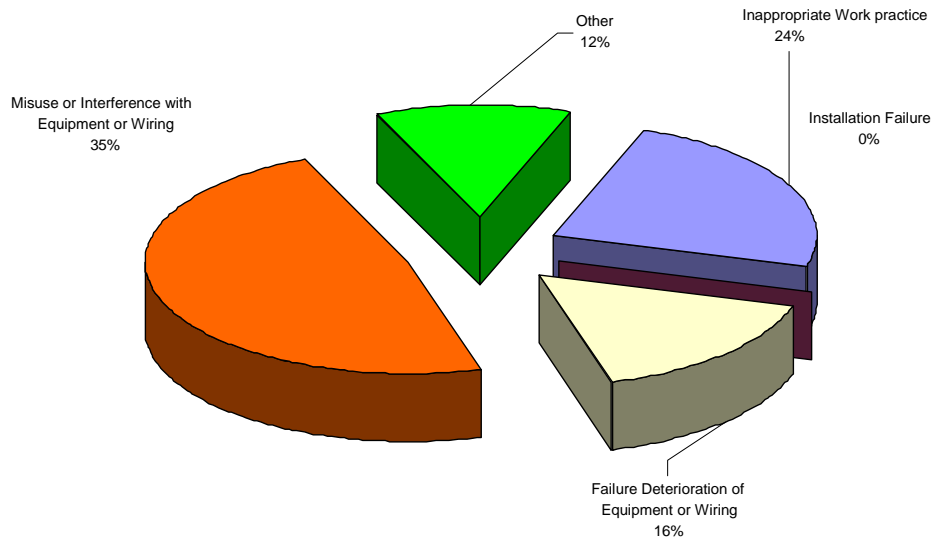
GRAPH 3.1 Electrical Fatalities Involving Customer's Installation, appliances or equipment sorted by Victim's Categories 2004-05



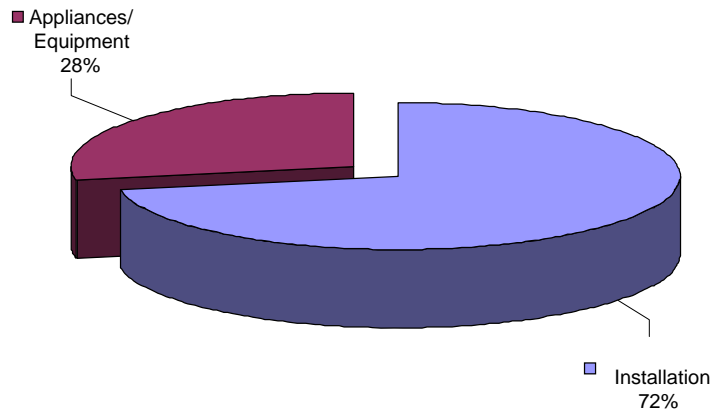
GRAPH 3.2 Electrical Fatalities Involving Customer's Installation or appliances/equipment in 2004-05



GRAPH 3.3 Contributing factors of Electrical Fatalities Involving Customer's Installation or appliances/equipment in 2004-05



GRAPH 3.4 Electrical Fatalities Involving Customer's Installation or appliances/equipment in 2004-05



4. Fatal Electrical Accidents 2004-05

Region:	NSW	VIC	SA	WA	QLD	TAS	NT	ACT	NZ	TOTAL
Fatalities:	11	1	1	4	7	1	2	0	7	34

FATALITIES		
	AUSTRALIA	NEW ZEALAND
TOTAL	27	7
		TOTAL
		34

YEAR	NSW	VIC	SA	WA	QLD	TAS	NT	ACT	AUST	NZ	TOTAL
2003-04	10	1	1	3	2	0	1	0	18	2	20
2002-03	13	0	1	7	1	4	0	1	27	8	35
2001-02	3	0	2	2	3	3	1	1	15	5	20
2000/01	9	5	7	4	10	0	2	0	37	2	39
1999-00	11	8	0	6	10	0	0	0	35	3	38
1998-99	9	7	3	5	11	0	2	0	37	11	48
1997-98	17	4	2	3	11	1	0	0	38	3	41
1996-97	9	8	2	5	20	0	2	0	46	12	58
1995-96	13	10	2	6	9	4	0	0	44	3	47
1995	13	8	2	8	7	2	1	0	41	5	46
1994	23	6	1	4	11	1	2	1	49	5	54
1993	16	5	3	6	12	3	1	3	49	6	55
1992	19	7	7	5	12	1	1	0	52	7	59

5. Summary of ERAC Electrical Fatality Reports 2004-05

Legend:

A Supply Electricity Worker
 B Electrical Worker
 C Non Electrical Worker
 D General Public

ELECTRICITY DISTRIBUTOR/SUPPLY AUTHORITY EQUIPMENT

	AUSTRALIAN CAPITAL TERRITORY				NEW SOUTH WALES				NORTHERN TERRITORY				QUEENSLAND				SOUTH AUSTRALIA			
	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
Overhead Line	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0
Underground Service	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Substation/Switchyard	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0

	TASMANIA				VICTORIA				WESTERN AUSTRALIA				NEW ZEALAND				TOTAL			
	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
Overhead Line	0	0	1	0	0	0	1	0	0	1	0	0	2	0	0	1	2	1	4	2
Underground Service	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Substation/Switchyard	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	1	0	0	0	1	0	0	1	0	0	2	0	0	1	2	1	4	2

An increase of 12.5% in number of deaths involving electricity distribution/supply authority equipment from 8 deaths in 2003-04 to 9 in 2004-05.

CONSUMER INSTALLATION OR EQUIPMENT

	AUSTRALIAN CAPITAL TERRITORY		NEW SOUTH WALES		NORTHERN TERRITORY		QUEENSLAND	
	Installation	Consumer Equipment (Appliances and Accessories)	Installation	Consumer Equipment (Appliances and Accessories)	Installation	Consumer Equipment (Appliances and Accessories)	Installation	Consumer Equipment (Appliances and Accessories)
Work practice	0	0	1	0	1	0	1	2
Installation Failure	0	0	0	0	0	0	0	0
Failure Deterioration of Equipment or Wiring	0	0	0	0	1	0	0	0
Misuse/Interference with Equipment or Wiring	0	0	6	1	0	0	3	0
Other	0	0	1	0	0	0	0	00
Total	0	0	8	1	1	0	4	2

	SOUTH AUSTRALIA		TASMANIA		VICTORIA		WESTERN AUSTRALIA	
	Installation	Consumer Equipment (Appliances and Accessories)	Installation	Consumer Equipment (Appliances and Accessories)	Installation	Consumer Equipment (Appliances and Accessories)	Installation	Consumer Equipment (Appliances and Accessories)
Work practice	0	0	0	0	0	0	0	0
Installation Failure		0	0	0	0	0	0	0
Failure Deterioration of Equipment or Wiring	0	1	0	0	0	0	2	0
Misuse/Interference with Equipment or Wiring	0	0	0	0	0	0	0	0
Other	0	0	0		0	0	0	1
Total	0	1	0	0	0	0	2	1

	NEW ZEALAND		TOTAL	
	Installation	Consumer Equipment (Appliances and Accessories)	Installation	Consumer Equipment (Appliances and Accessories)
Work practice	1	0	4	2
Installation Failure	0	0	0	0
Failure Deterioration of Equipment or Wiring	0	0	3	1
Misuse/Interference with Equipment or Wiring	1	1	10	2
Other	0	1	1	2
Total	2	2	18	7

An increase of 108.3% in the number of deaths associated with customer's electrical installations, appliances or equipment from 12 in 2003-04 to 25 in 2004-05.