

Electrical Fatal Incident Data

Australia & New Zealand 2015 - 2016

Definitions

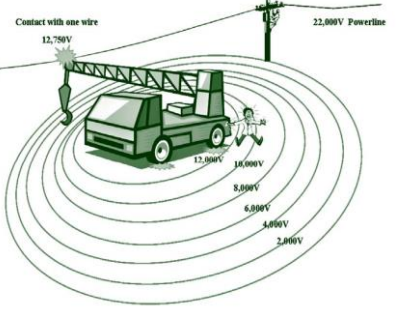


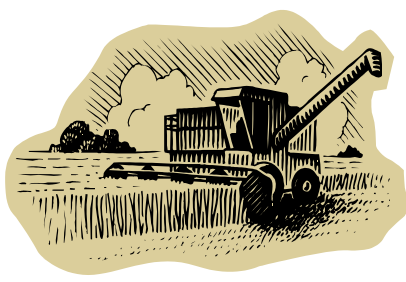
<i>“Consumer Installation”</i>	means all parts of an electrical installation past the point of supply on the consumer side.
<i>“Distribution or Supply Equipment”</i>	means equipment used in the generation, transmission, supply or distribution of electricity.
<i>“Electrical Fatal Incident”</i>	means any fatal event that results from an electrical shock, electrical burn or electrical arc burn except if linked to the initial event of a natural disaster, criminal activity or suicide.
<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>“Supply Worker”</i>	means a person who is employed by a network operator.
<i>“Work Practice”</i>	means the process or method by which work is carried out.

During 2015-16

This report covers the 12 month period from 1 July 2015 to 30 June 2016. It is based on details of incidents reported to electrical safety regulators in Australia and New Zealand.

18 electrical deaths from 17 incidents were recorded in Australia and New Zealand in 2015-16. This is equivalent to 0.63 deaths per million people (dmp) which is 0.2 dmp above the last year.

Out of 18 deaths, 16 occurred in Australia and two occurred in New Zealand.

 <p>Contact with one wire 22,000V Powerline 12,780V 12,000V 10,000V 8,000V 6,000V 4,000V 2,000V</p>	<p>There was one distribution network related death caused by an electrical accident.</p>
	<p>90% (105 of 117) of the number of deaths associated with the electricity supply network from 2000-01 to 2015-16 (last 16 years) involved contact with overhead conductors.</p>
	<p>17 deaths caused by 16 incidents involving customers' installations, appliances or equipment.</p>
	<p>Of the people who were electrocuted, 67% (12 of 18) were either non-electrical workers, or the general public.</p>

Trend Analysis

Electrical fatality information from the last 16 years (2000-01 to 2015-16) has been analysed for trends and frequency.

The electrical deaths over 16 years continue to show a decrease from an average (three years) of 1.79 deaths per million people (dmp) in 2000-01 to 0.50 in 2015-16. An average rate of reduction is 0.08 dmp. In Australia, the reduction is from 1.87 to 0.54 (0.083 per year) dmp, while for New Zealand the reduction is from 1.39 to 0.29 (0.069 per year).

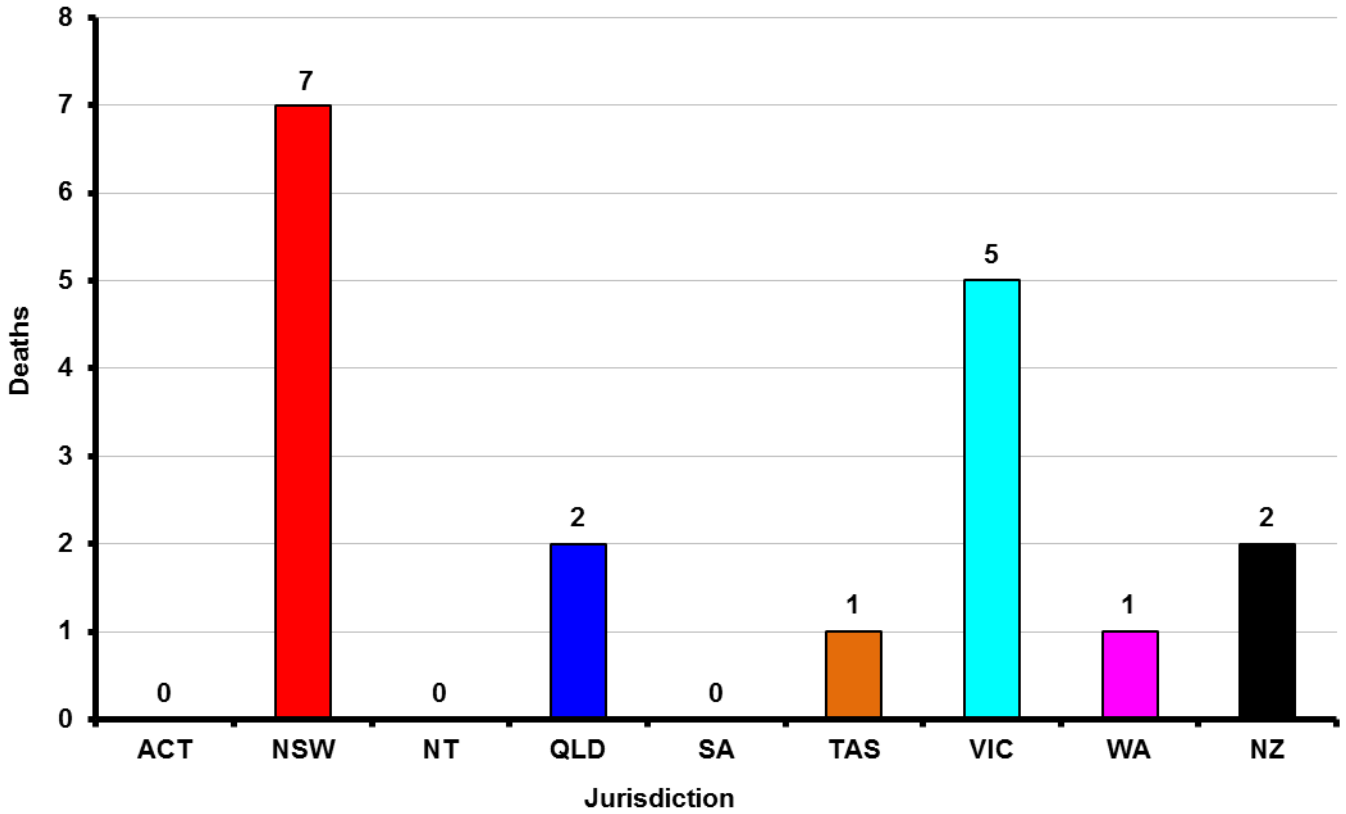
The most electrical deaths associated with electricity networks are as a result of working on or near energised overhead conductors. 89% (104 of 117) of electrical deaths associated with electricity supply networks involved overhead conductors.

Consumer appliances/equipment were involved in nearly twice (241) the number of deaths than the electricity supplier assets (117). Also, there was a large variation in the number of deaths involving consumer equipment from one year to the next than in deaths involving electrical supplier assets. The dmp continued to decline over the last 16 years for both consumer and supplier assets.

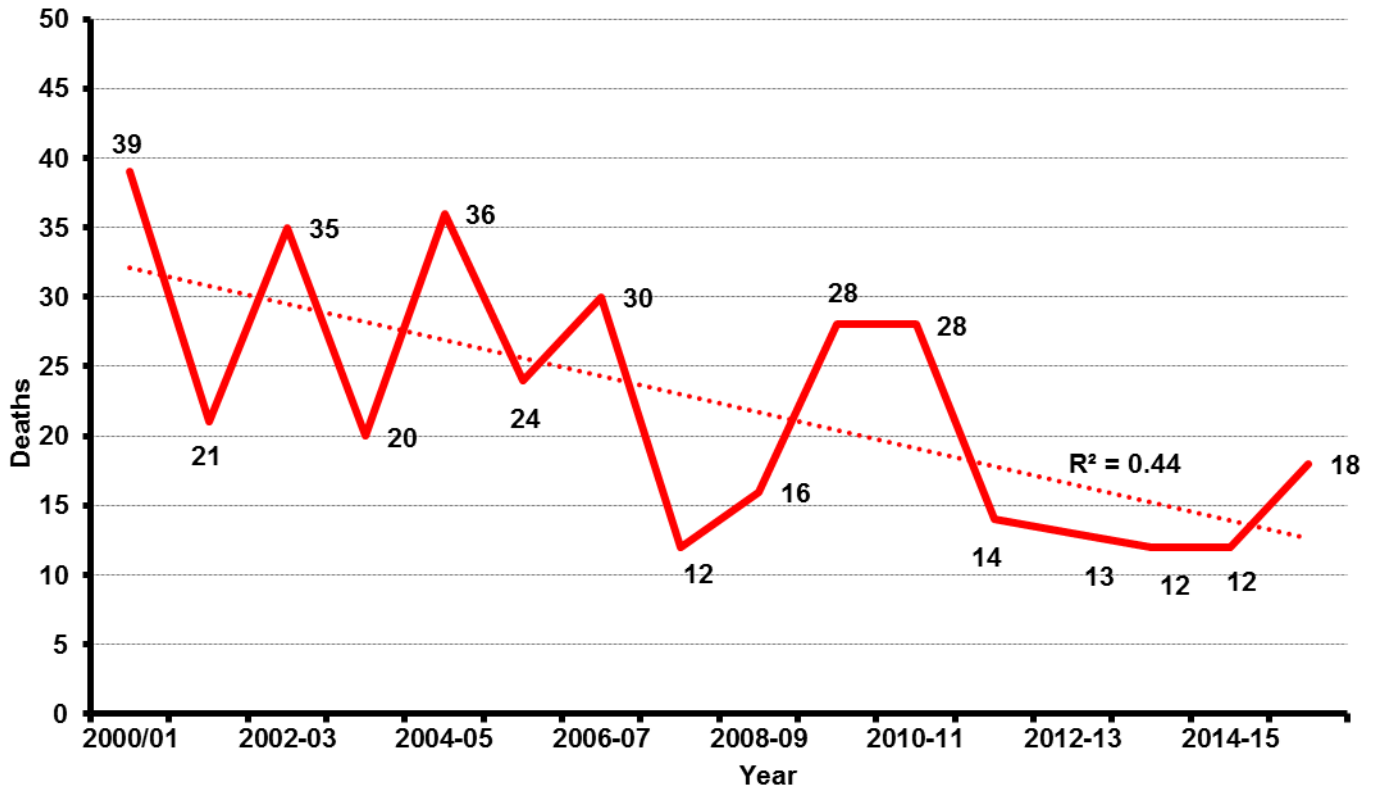
This report presents the information in a series of charts and tables

1. Regional Fatalities

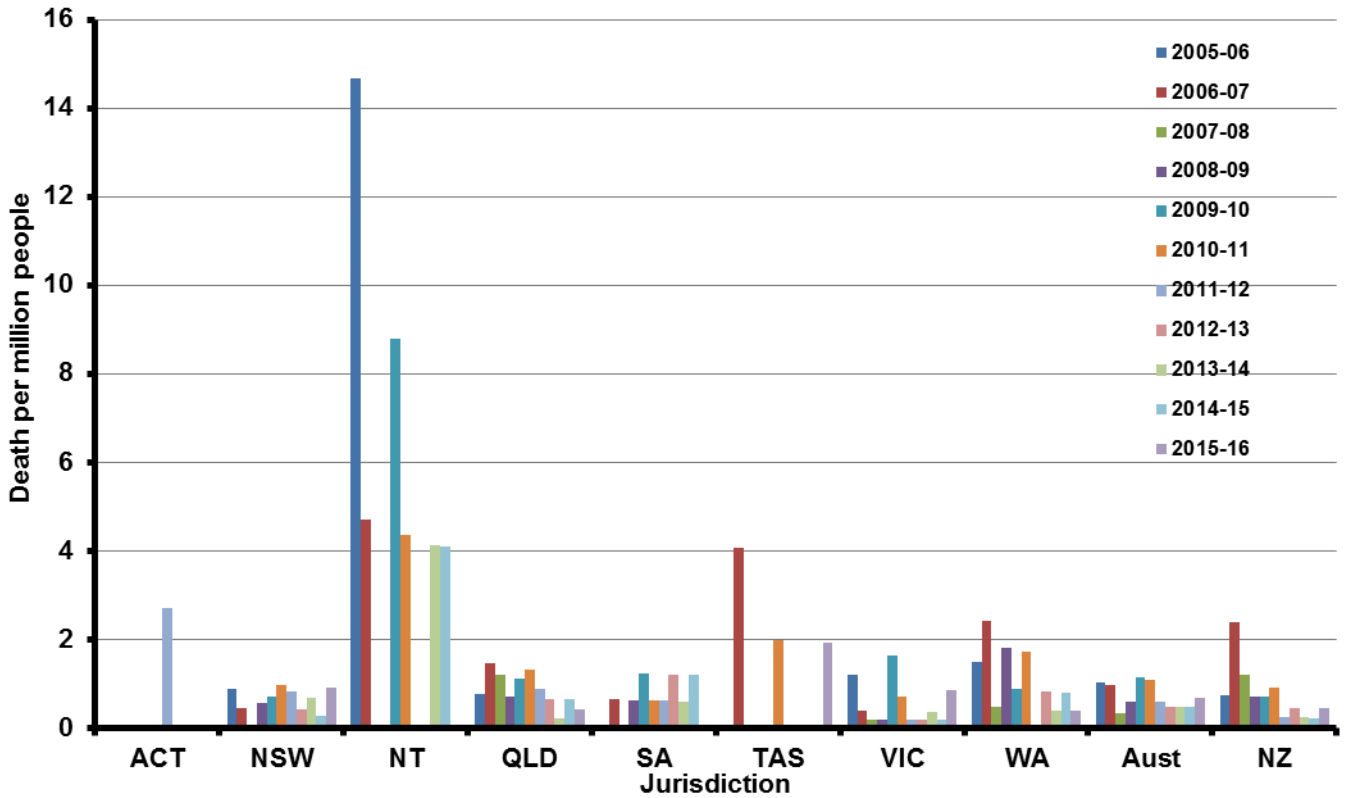
GRAPH 1.1 Electrical Deaths in Australia and New Zealand – 2015-16



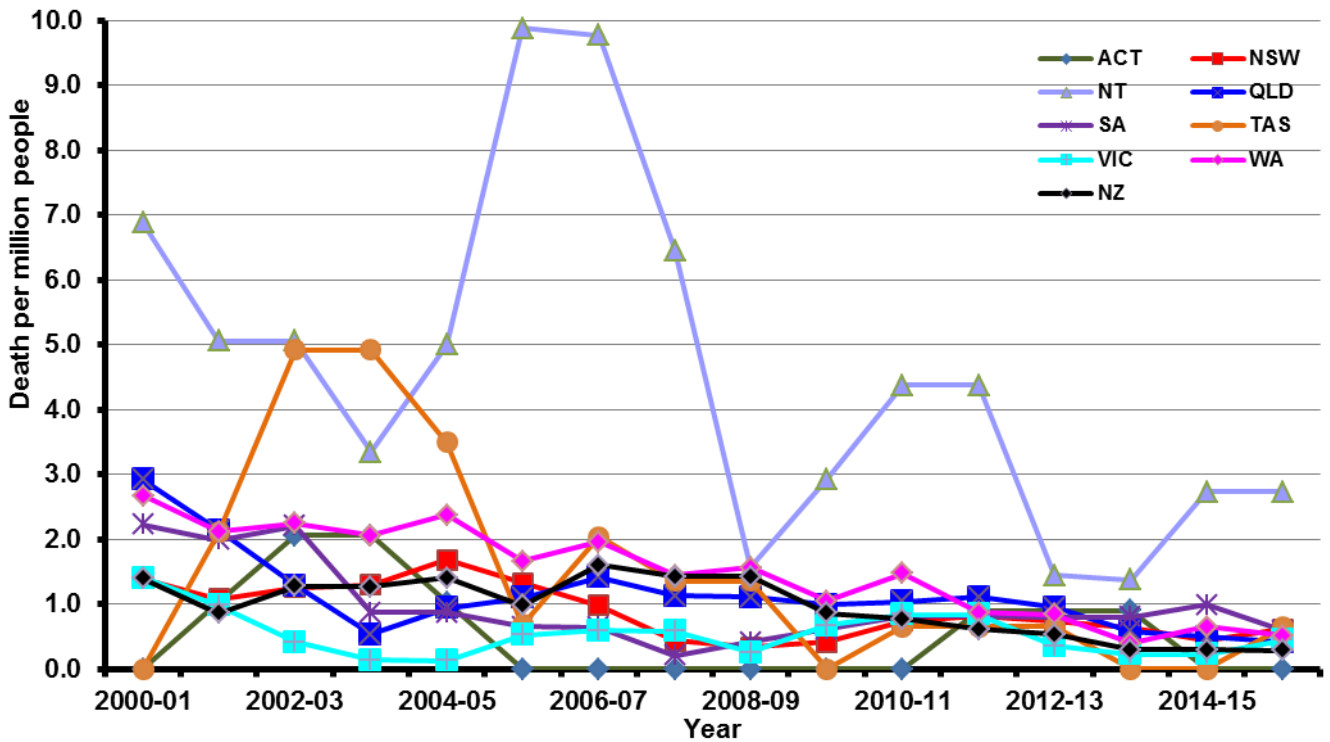
GRAPH 1.2 Number of Electrical Deaths in Australia and New Zealand



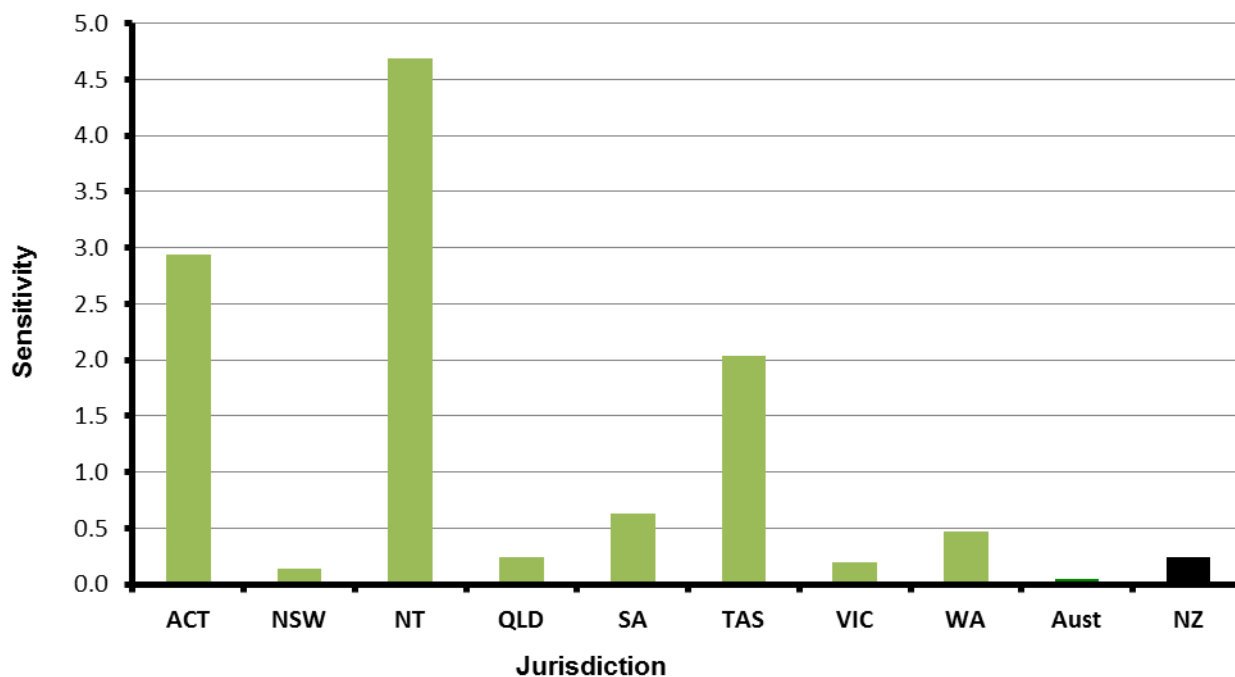
GRAPH 1.3 Electrical Deaths per Million People from 2005-06



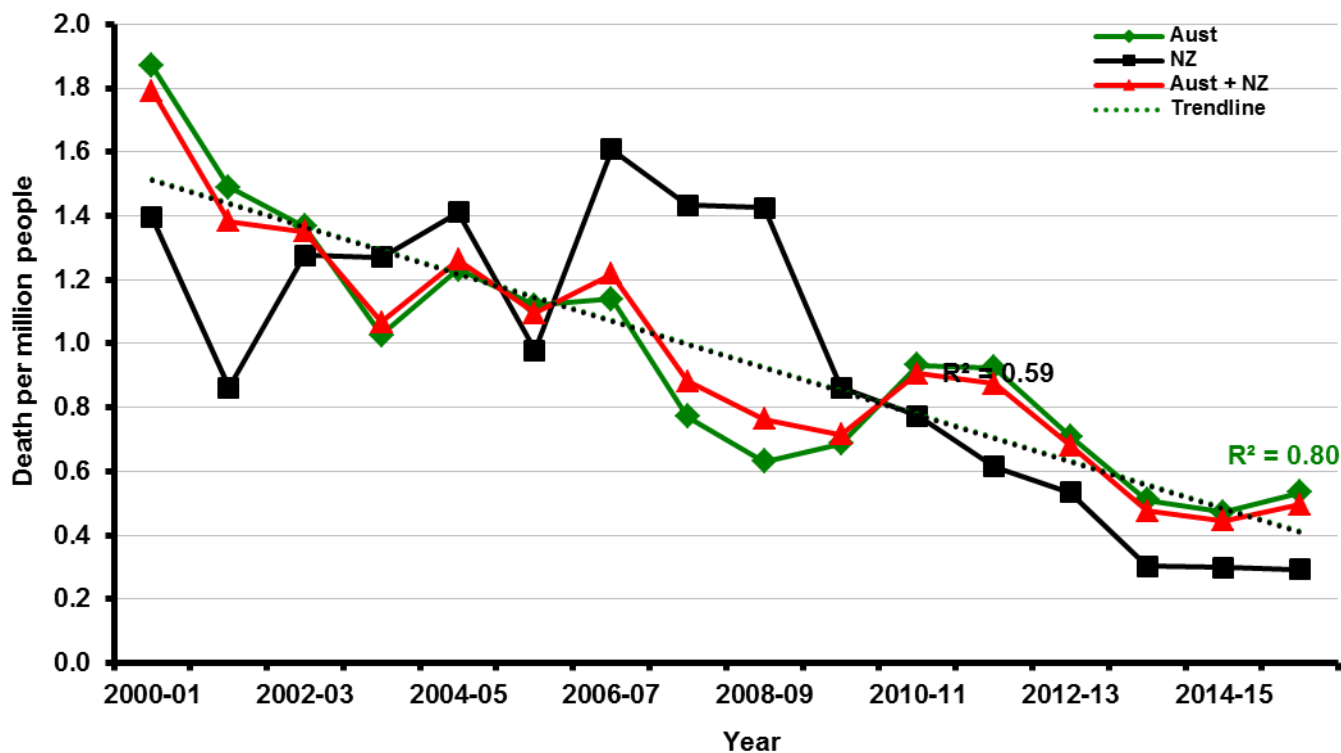
GRAPH 1.4 Trend in Electrical Deaths (Three Year Moving Average per Million People)



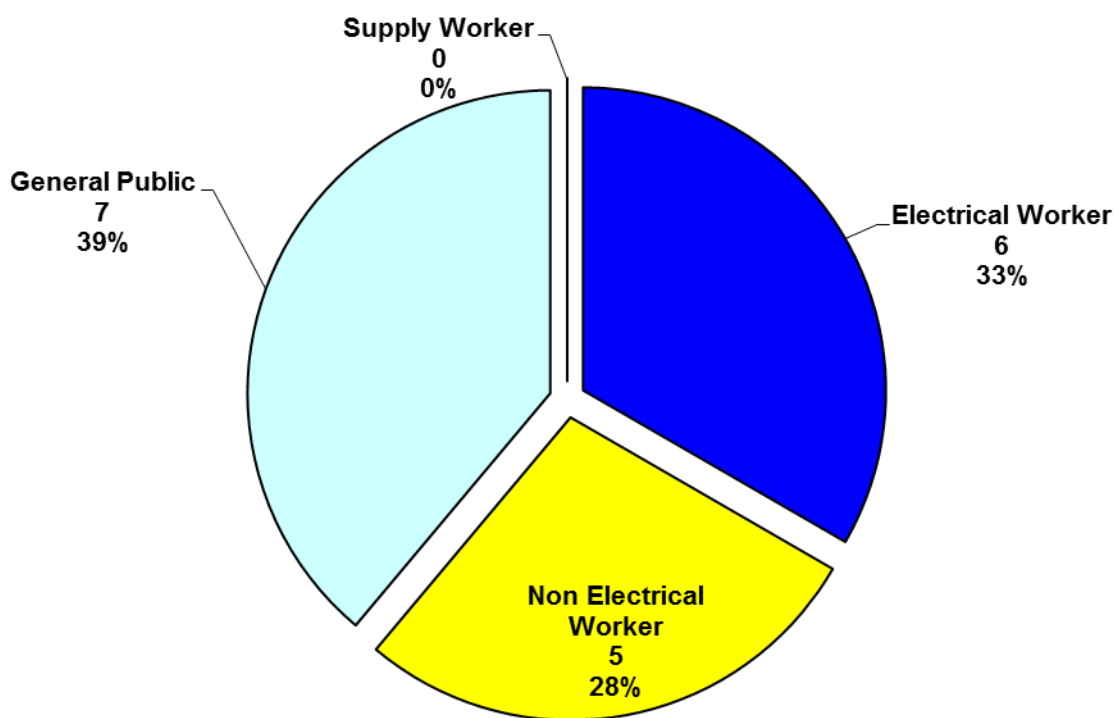
GRAPH 1.5 Sensitivity Analysis for Fatality Rate



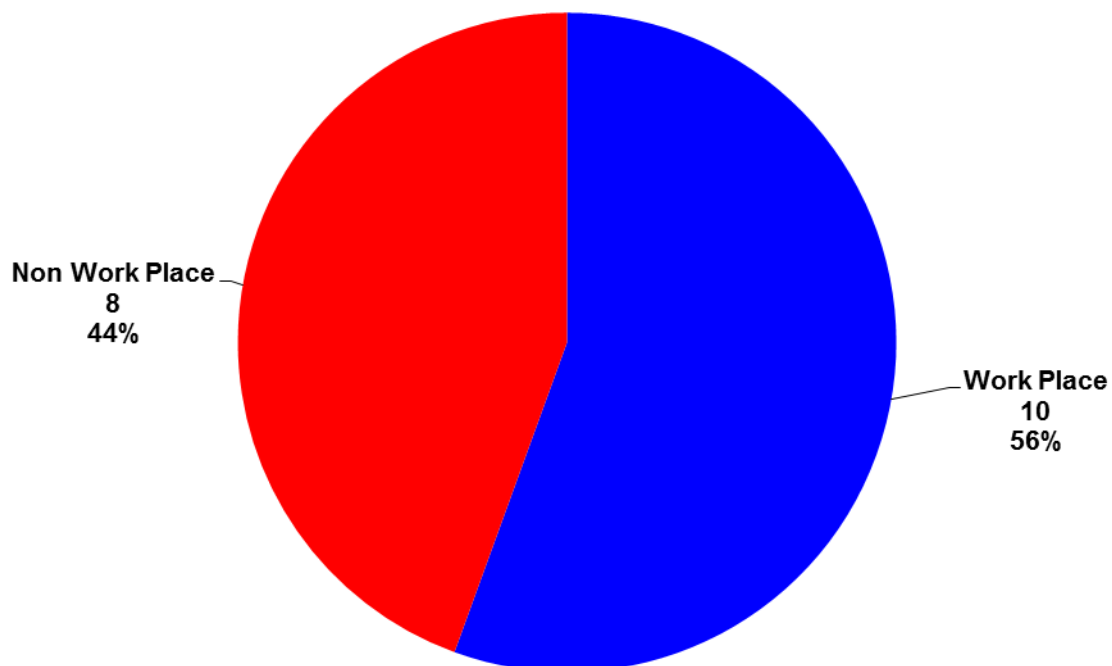
GRAPH 1.6 Trend in Electrical Deaths (Three Year Moving Average per Million Population) in Australia and New Zealand



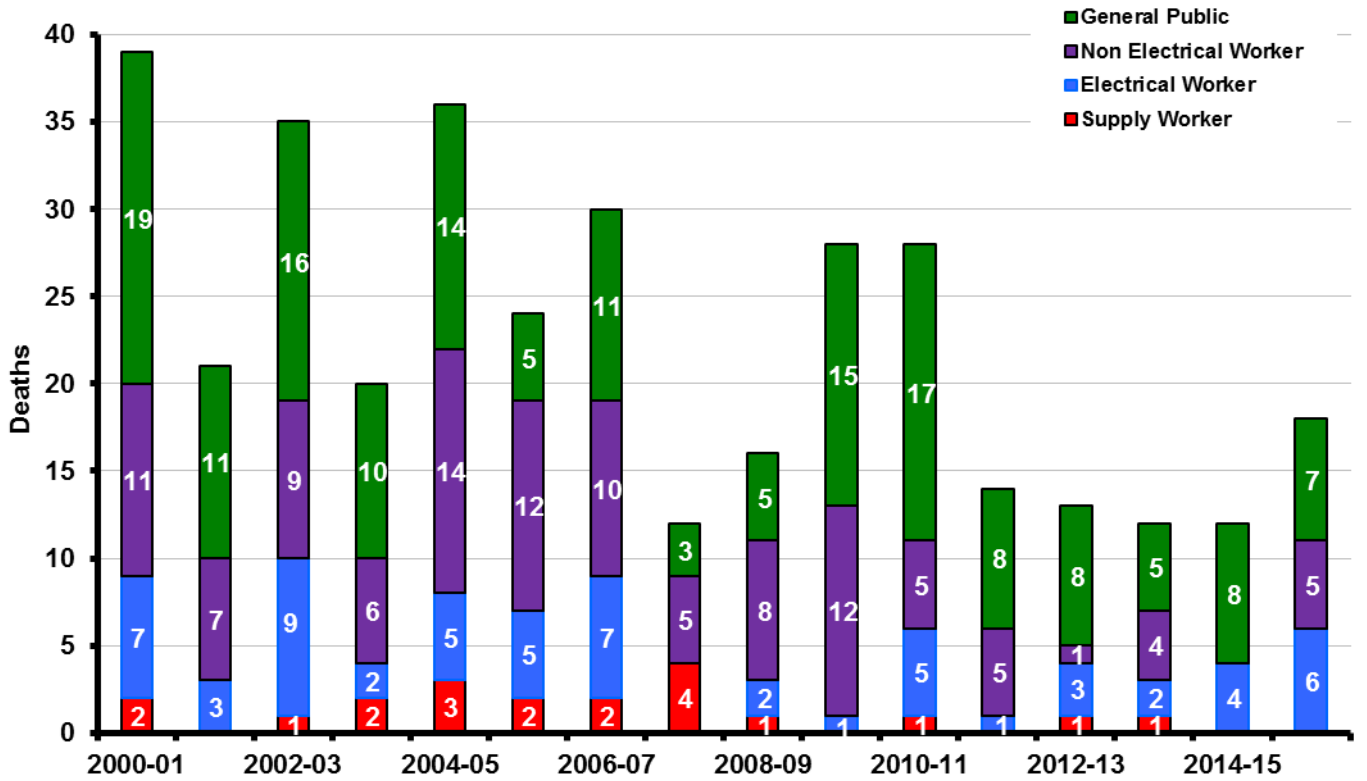
GRAPH 1.7 Australia and New Zealand Victims Categories – 2015-16



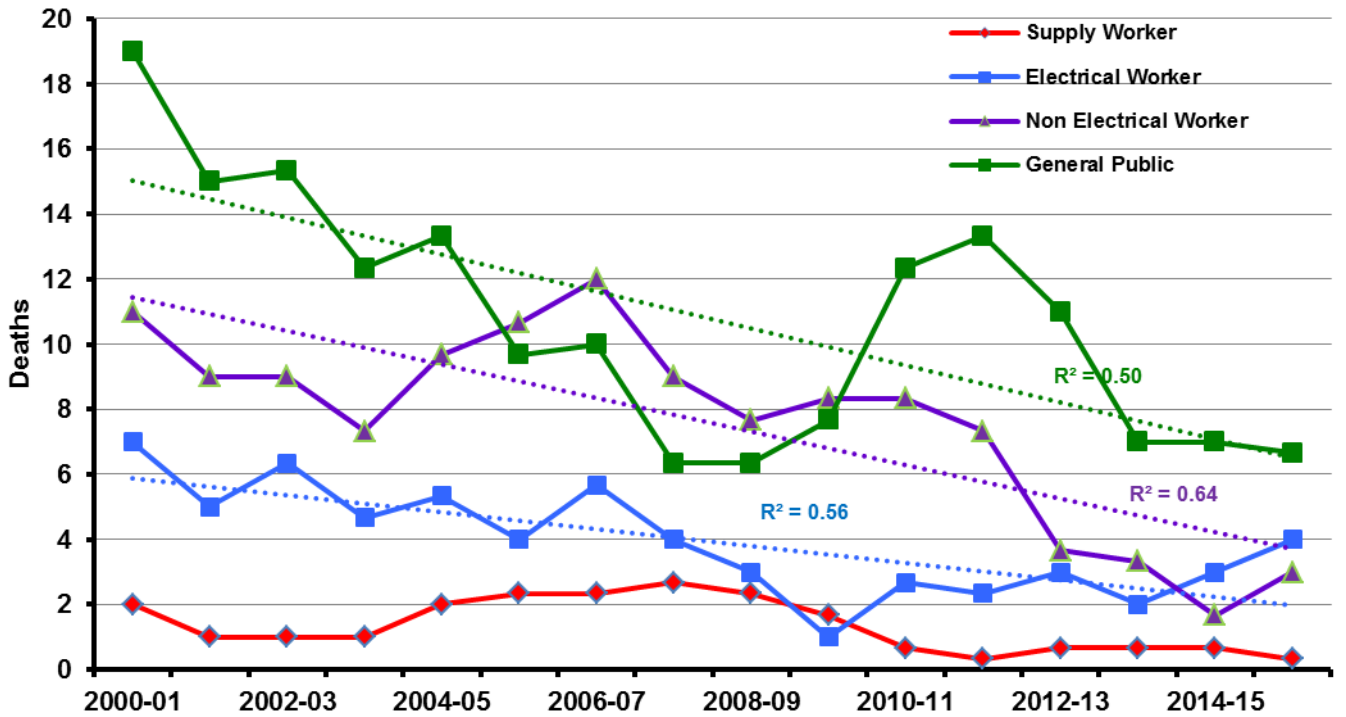
GRAPH 1.8 Electrical Deaths: Work Place versus Non-Workplace – 2015-16



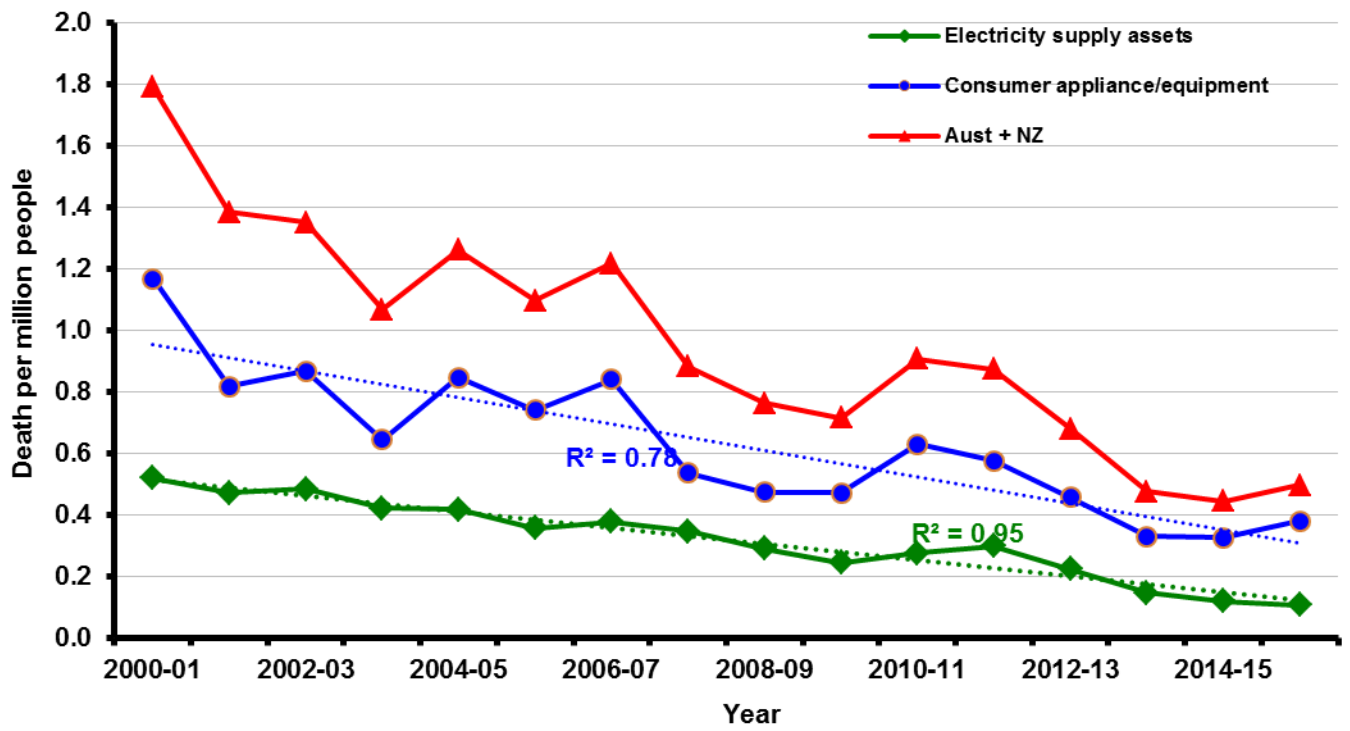
GRAPH 1.9 Electrical Deaths Sorted by Victim Categories



GRAPH 1.10 Trends by Victim Categories with Three Year Moving Average

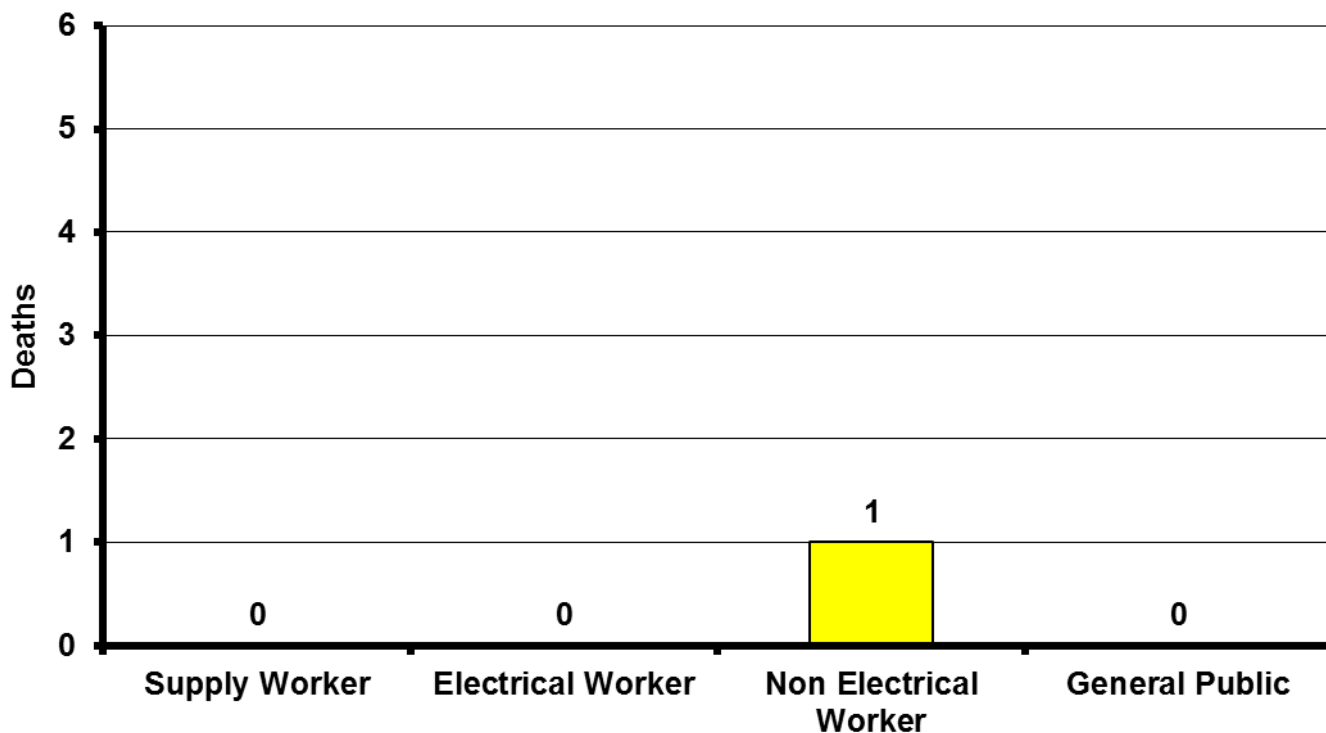


GRAPH 1.11 Trends by Asset Type with Three Year Moving Average



2. Fatalities involving Network Assets

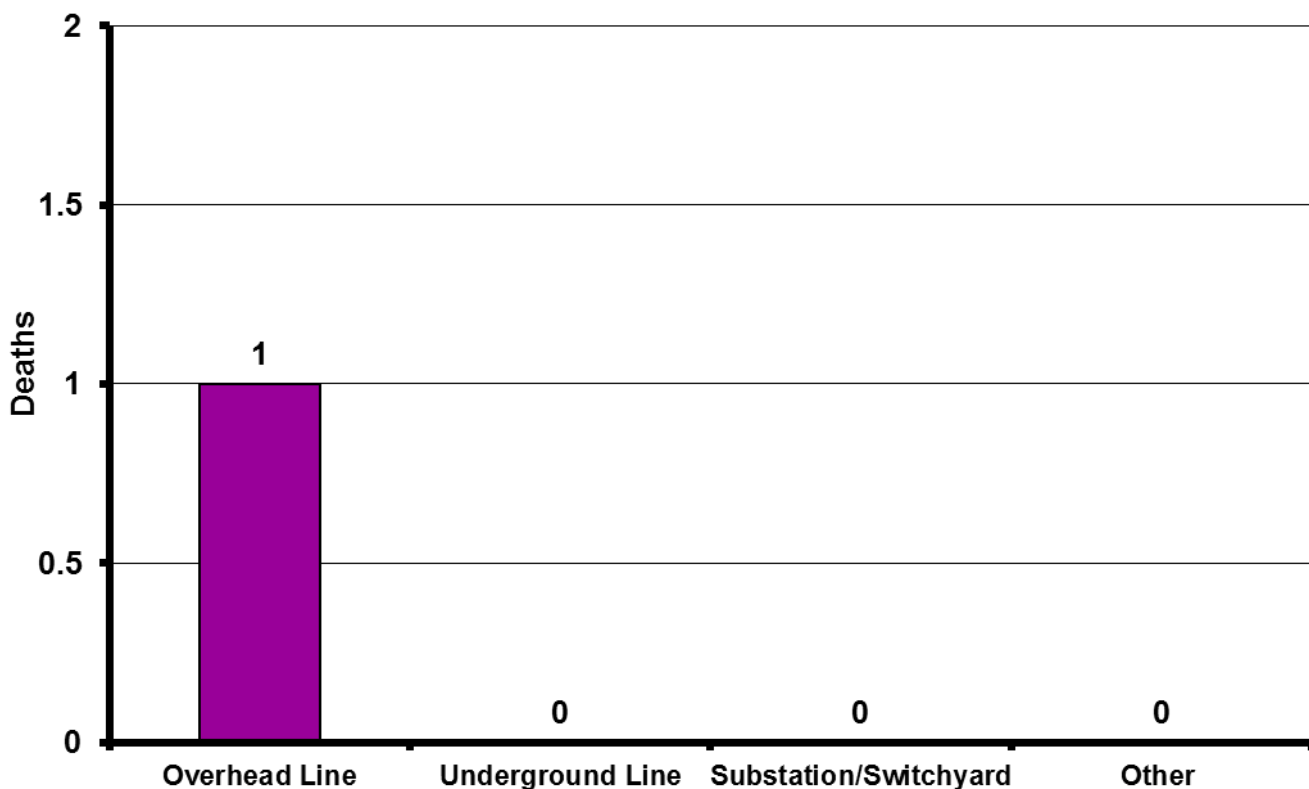
GRAPH 2.1 Deaths Involving Electricity Supply Assets Sorted by Victim categories – 2015-16



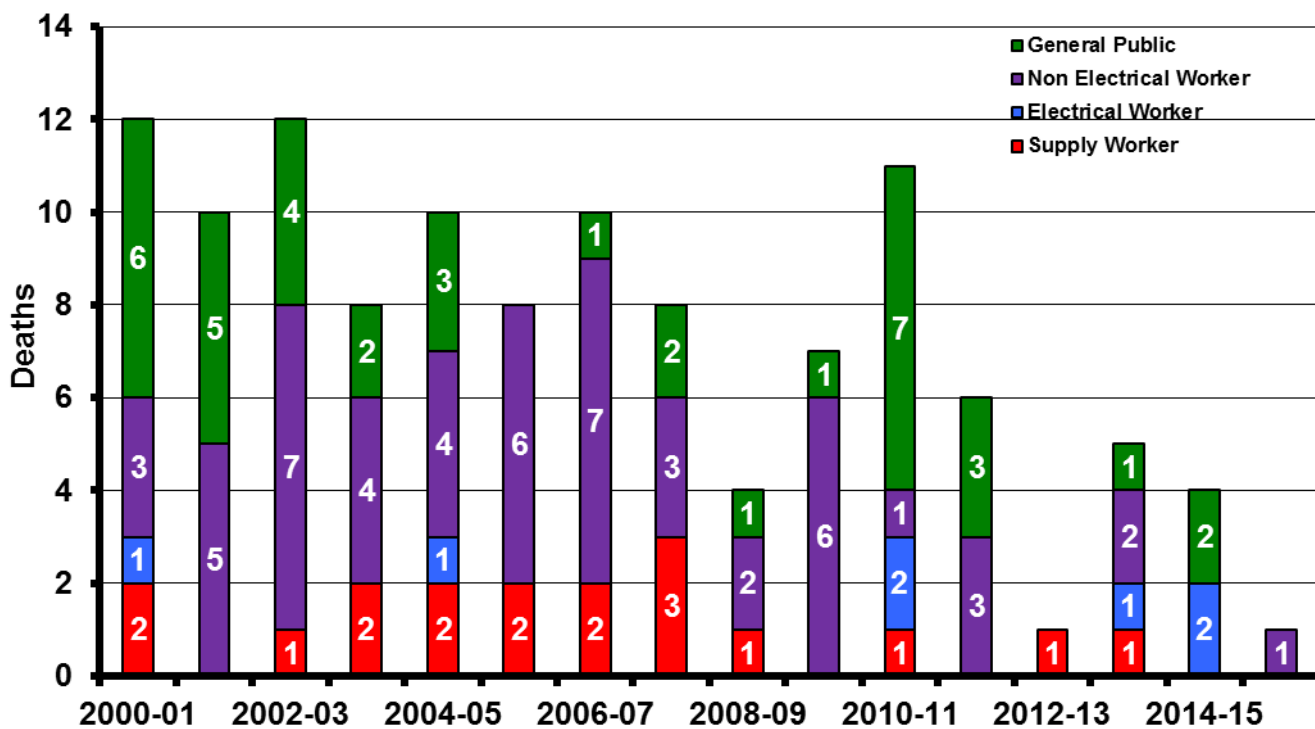
GRAPH 2.2 Deaths Involving Electricity Supply Assets: Work Place versus Non-Workplace – 2015-16



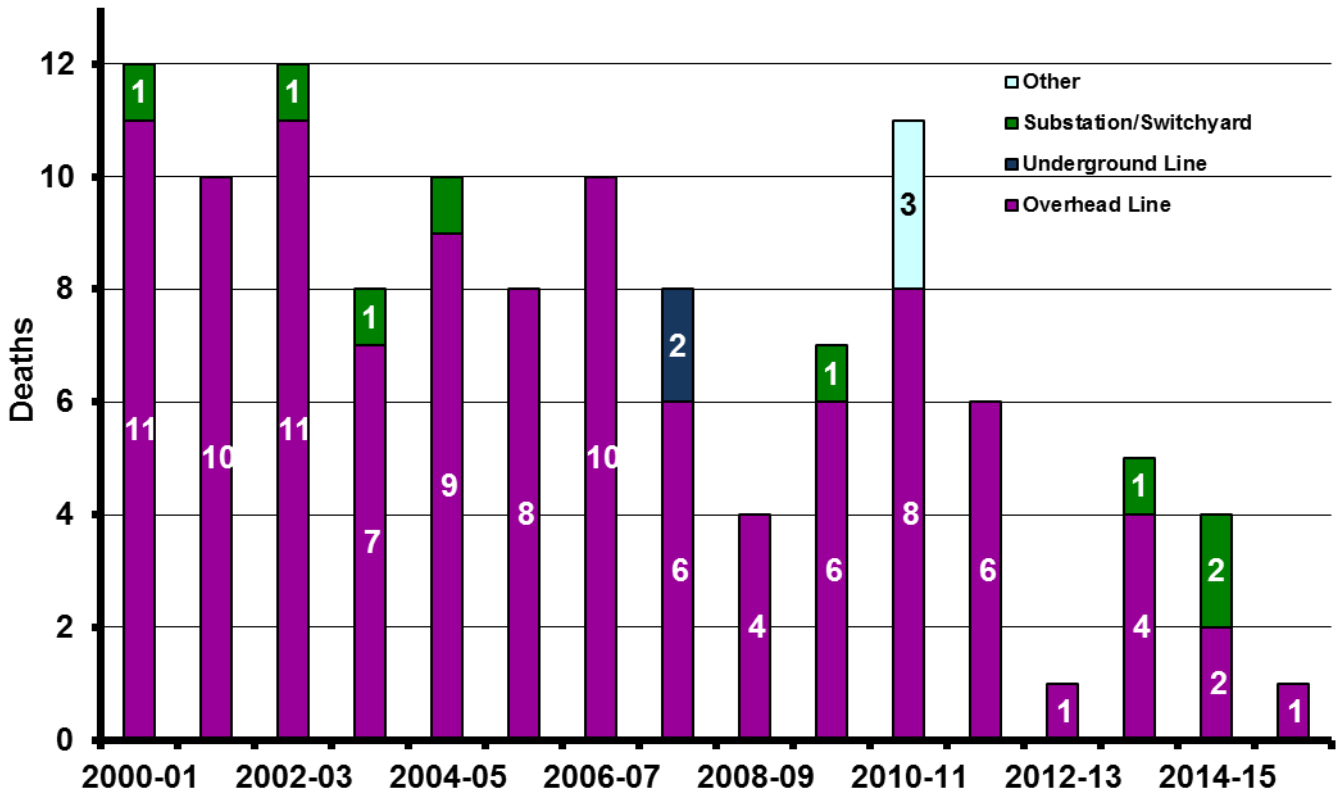
GRAPH 2.3 Deaths Involving Electricity Supply Assets Sorted by Asset Types – 2015-16



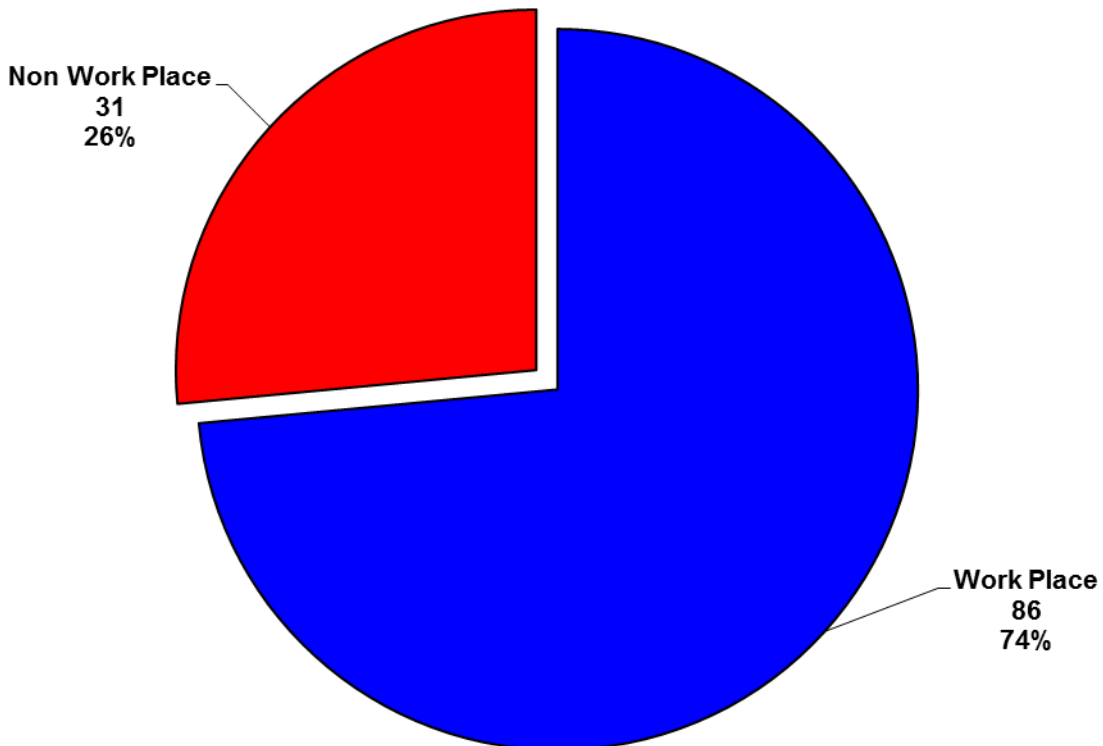
GRAPH 2.4 Deaths Involving Electricity Supply Assets by Victim Categories



GRAPH 2.5 Deaths Involving Electricity Supply Assets Sorted by Asset Types

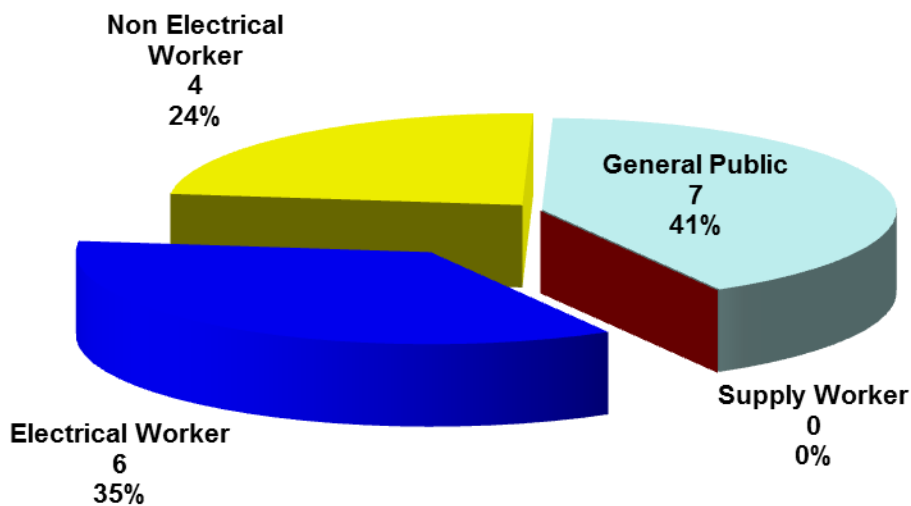


GRAPH 2.6 Deaths Involving Electricity Supply Assets: Work Place versus Non-Workplace

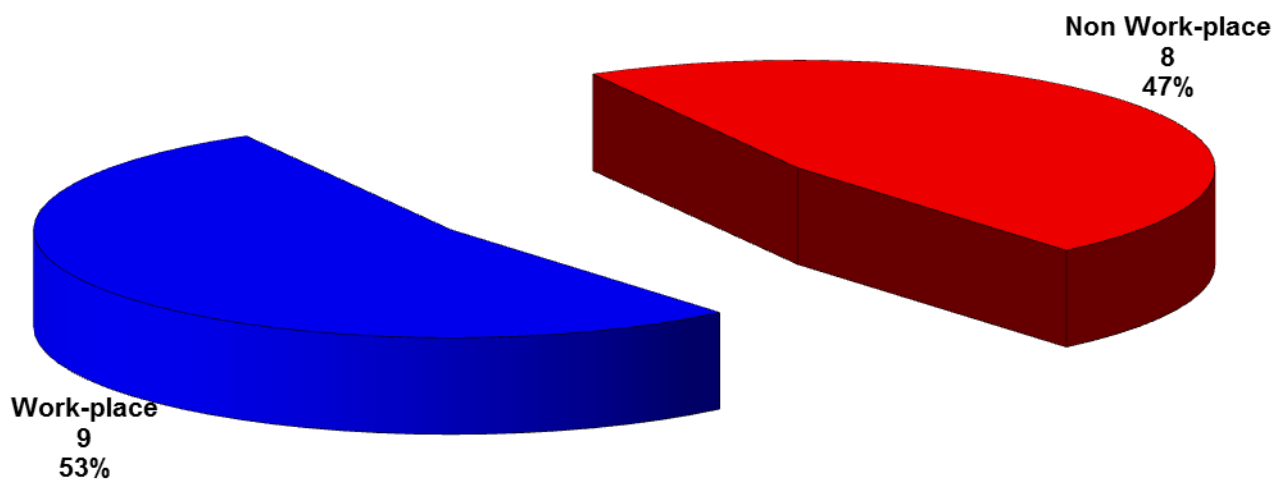


3. Fatalities involving Consumer Installation and Equipment

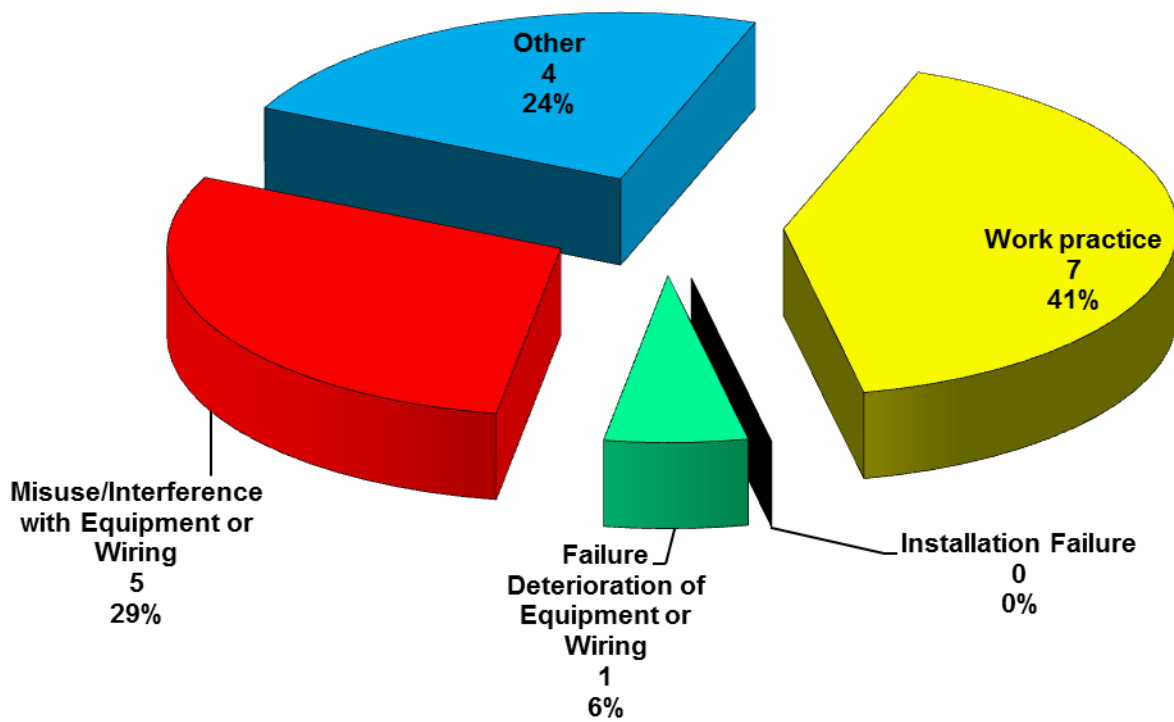
GRAPH 3.1 Deaths Involving Consumer Installations, Appliances or Equipment Sorted by Victim Categories – 2015-16



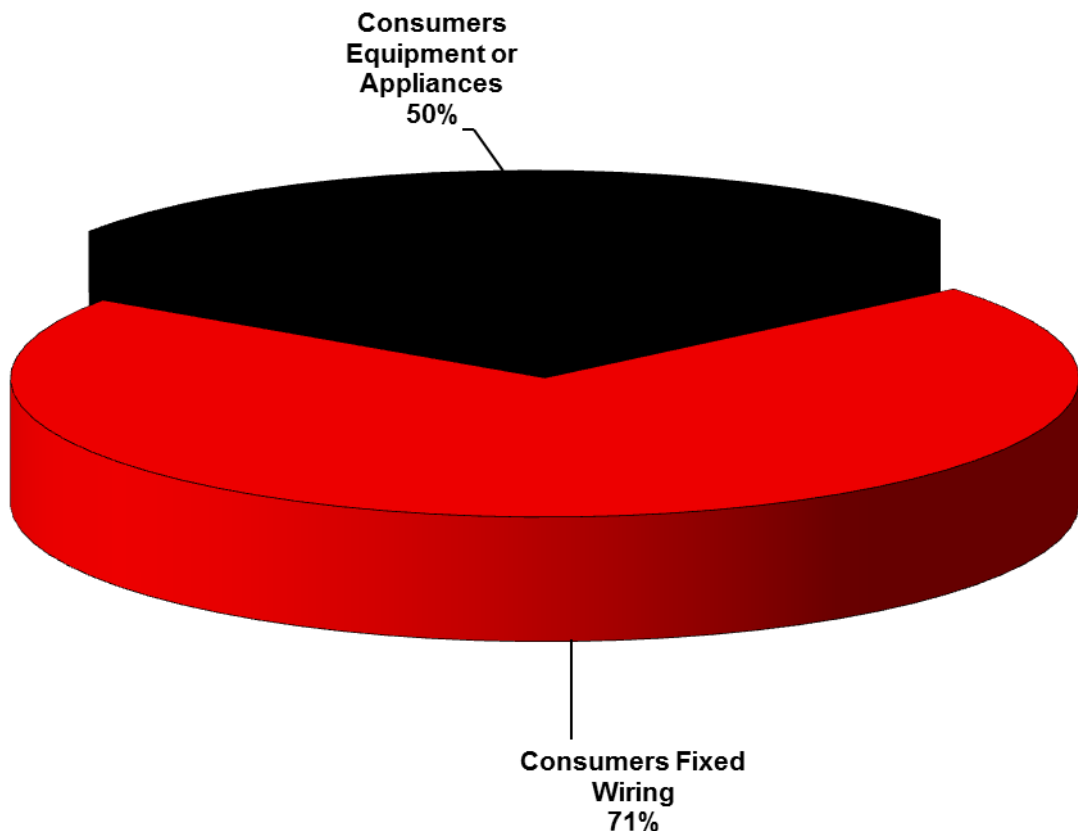
GRAPH 3.2 Deaths Involving Consumer Installations or equipment at work place Sorted by Location – 2015-16



GRAPH 3.3 Contributing factors for Electrical Deaths Involving Consumer's Installation or Equipment – 2015-16



GRAPH 3.4 Deaths Involving Consumer Installations (Fixed Wiring) or Equipment - 2015-16



4. Fatal Electrical Accidents 2015-16

Region:	ACT	NSW	NT	QLD	SA	TAS	VIC	WA	AUST	NZ	TOTAL
Fatalities:	0	7	0	2	0	1	5	1	16	2	18

YEAR	ACT	NSW	NT	QLD	SA	TAS	VIC	WA	AUST	NZ	TOTAL
2000/01	0	9	2	10	7	0	5	4	37	2	39
2001-02	1	3	1	3	2	3	1	2	16	5	21
2002-03	1	13	0	1	1	4	0	7	27	8	35
2003-04	0	10	1	2	1	0	1	3	18	2	20
2004-05	0	11	2	8	2	1	1	4	29	7	36
2005-06	0	6	3	3	0	0	6	3	21	3	24
2006-07	0	3	1	6	1	2	2	5	20	10	30
2007-08	0	0	0	5	0	0	1	1	7	5	12
2008-09	0	4	0	3	1	0	1	4	13	3	16
2009-10	0	5	2	5	2	0	9	2	25	3	28
2010-11	0	7	1	6	1	1	4	4	24	4	28
2011-12	1	6	0	4	1	0	1	0	13	1	14
2012-13	0	3	0	3	2	0	1	2	11	2	13
2013-14	0	5	1	1	1	0	2	1	11	1	12
2014-15	0	2	1	3	2	0	1	2	11	1	12
2015-16	0	7	0	2	0	1	5	1	16	2	18

5. Summary of ERAC Electrical Fatality Reports 2015-16

Legend:
 A Supply Worker
 B Electrical Worker
 C Non Electrical Worker
 D General Public

ELECTRICITY DISTRIBUTOR/SUPPLY AUTHORITY EQUIPMENT

	ACT				NSW				NT				QLD				SA			
	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	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Underground Line	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	0	0	0	0	0	0	0	0	1	0	0	0	0	0
TOTAL	0				0				0				1				0			

	TAS				VIC				WA				NZ				TOTAL				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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Underground Line	0	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	0
Other	0	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	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
TOTAL	0				0				0				0				1				1

Legend:

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

CONSUMER INSTALLATION (Installation of Fixed Equipment)

	ACT				NSW				NT				QLD				SA			
	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
Work practice	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Installation Failure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Failure Deterioration of Equipment or Wiring	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Misuse/Interference with Equipment or Wiring	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0
Other	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	1	0	2	0	0	0	0	0	0	0	1	0	0	0	0
TOTAL	0				3				0				1				0			

	TAS				VIC				WA				NZ				TOTAL				Total
	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	
Work practice	0	0	0	0	0	2	1	0	0	1	0	0	0	2	0	0	0	6	1	0	7
Installation Failure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Failure Deterioration of Equipment or Wiring	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Misuse/Interference with Equipment or Wiring	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	2	3
Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
TOTAL	0	0	0	0	0	2	3	0	0	1	0	0	0	2	0	0	0	6	3	3	12
TOTAL	0				5				1				2				12				

Legend:
 A Supply Worker
 B Electrical Worker
 C Non Electrical Worker
 D General Public

CONSUMER EQUIPMENT (Appliance or Accessories)

	ACT				NSW				NT				QLD				SA			
	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
Work practice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Installation Failure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Failure Deterioration of Equipment or Wiring	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Misuse/Interference with Equipment or Wiring	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0				4				0				0				0			

	TAS				VIC				WA				NZ				TOTAL				Total				
	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D					
Work practice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Installation Failure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Failure Deterioration of Equipment or Wiring	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Misuse/Interference with Equipment or Wiring	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
Other	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3
TOTAL	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	5
TOTAL	1				0				0				0				5								