

May 2003

STATISTICS

RE: ELECTRICAL INCIDENTS IN ALBERTA

2002 04 01 to 2003 03 31

Regulations under the Safety Codes Act require that all electrical accidents and power line contacts be reported to the Technical Administrator. Alberta Municipal Affairs has compiled a summary report of those incidents reported between April 1, 2002 and March 31, 2003. Organizations in the electrical industry may use this information for promoting public awareness of electrical safety risks to reduce electrical incidents.

A total of 447 incidents were reported: 369 involving overhead power lines, 68 involving underground power lines and 10 involving other types of electrical installations or equipment. Of those, 1 fatality and 20 injuries were recorded.

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

- (1) **Injury Incidents** – Pages 2, 3 and 4 summarize fatal and non-fatal injury incidents reported in the period indicated. The table on page 2 outlines the persons, voltages, and equipment involved in the incidents. A brief description of injury incidents, in chronological order, is provided on pages 3 and 4.
- (2) **Power Line Contacts** – Pages 5, 6 and 7 summarize the power line contacts reported. The table on page 5 shows different types of power line contacts and the number of fatal and non-fatal injuries incurred for each type of contact. A table and two charts, on pages 6 and 7, compare historical information regarding power line contacts with current statistics.

Since not all incident occurrences are reported, this report is not an accurate accounting of all the incidents that occurred in Alberta. It does serve as an approximation of the total number of incidents that may have occurred, and provides a sample of the types of accidents that happened.

**INJURY INCIDENTS REPORTED
2002 04 01 to 2003 03 31**

**FATAL (F)
NON-FATAL (N)**

1. PERSONS INVOLVED

A. Performing electrical work

1. Qualified electrical worker
2. Qualified power electrician/lineman
3. Non-qualified person

F	N
	6
	3
1	1

B. Not performing electrical work

1. Adult
2. Child

F	N
	10

2. VOLTAGES INVOLVED

**A. Systems or equipment
(not power line contacts)**

1. 750 volts or less
2. Over 750 volts

F	N
	9
1	3

**B. Contact with power lines
(not included in A)**

1. 750 volts or less
2. Over 750 volts

F	N
	1
	7

3. SYSTEMS OR EQUIPMENT INVOLVED

A. Interior wiring systems

1. Service/distribution equipment
2. Motor control equipment
3. Switches, fixtures, etc.
4. Test equipment
5. General wiring/conductors
6. Other equipment

F	N
	4
	1
	4
1	

B. Line construction or maintenance

1. Overhead systems (poles, lines, etc.)
2. Substations and transformers
3. Underground systems
4. Other

F	N
	2
	2

C. Utilization equipment

1. Household appliances
2. Commercial/industrial equipment
3. Portable power tools
4. Extension cords
5. Welding machines/motors
6. Mobile homes and trailers
7. Signs
8. Other

F	N
	1

D. Non-electrical equipment

1. Cranes/booms/pickers
2. Ladders/scaffolds
3. Drilling rig equipment
4. Farm equipment
5. Moving buildings
6. Objects (pipe, antennae, etc.)
7. Excavating equipment
8. Vehicles (high loads, truck boxes, etc.)
9. Other

F	N
	2
	1
	2
	1

SUMMARY OF INJURY INCIDENTS

Fatal Injuries

Aug./2002 1. A power line construction employee was killed when a 600 V multi-meter he was holding failed, resulting in severe injuries and subsequent death. Another employee had the leads of the voltmeter and attempted to take voltage readings across a 25 kV fuse block in a pad mounted transformer.

Non-Fatal Injuries

April/2002 1. A farmer received burns to his right arm and shoulder as a result of a grain auger contacting an overhead power line.

May/2002 2. A steam bay attendant received slight burns to his hand after attempting to turn on a 480 volt light switch. Wires in the enclosure may have been pinched when the switch was mounted in the enclosure.

June/2002 3. Two workers received undetermined injuries when a picker truck contacted a 13.8 kV overhead power line.

July/2002 4. A worker received burns to his hand and foot when a metal flagpole he was removing contacted an overhead 25 kV power line.

Aug./2002 5. An electrician received burns to his hand when a ground wire contacted a phase conductor in a 120/240 panel he was working in.

6. An electrician received burns to his face, neck, arms and hands when a loose piece of bus bar contacted a phase conductor in a 480 volt panel.

7. A man received undetermined injuries when he contacted a service drop to a house while shingling the roof.

8. A lineman received severe burns while working on an overhead power line.

Sept./2002 9. A derrick man received a shock when he attempted to push a reset button and instead contacted an energized conductor.

Oct./2002 10. Three workers received a flash to their eyes when a short circuit occurred while testing lights.

- Nov./2002 11. An electrical technician received a flash while attempting to rack 5 kV contactor into a cell.
- Jan./2003 12. An oilfield hoe operator received second degree burns to his fingers and toe. When loading a tracked hoe onto a bed truck the arm of the hoe contacted a 25 kV overhead power line.
13. A maintenance worker received burns to his hands and face as a result of a short circuit in a distribution panel.
- Mar./2003 14. A power systems electrician received first and second degree burns to his face and a power lineman received burns to his hand, arm and face while performing maintenance work on an underground network transformer they thought had been de-energized.
15. A welder apprentice received an electrical shock when plugging in a drill.
16. A worker received electrical burns to much of his body and subsequent injuries when he fell 5m off of a scissor lift. While installing a sign the worker raised a metal rod into a 69 kV overhead power line.

Livestock

- May/2002 1. A cow was killed after contacting an overhead power line that had been brought down in a snowstorm.
- Aug./2002 2. Three cows were killed after contacting a 7.2 kV overhead power line that had fallen to the ground after a windstorm.

**REPORTED ELECTRICAL POWER LINE CONTACTS
2002 04 01 to 2003 03 31**

TYPE OF CONTACT OR DAMAGE	# OF LINE CONTACTS	NON-FATAL INJURIES	FATAL INJURIES
Overhead Utility Systems			
Vehicle-mounted equipment (booms, hoists, cranes, etc.)	37	3	
Trucks with raised boxes and vehicles transporting high loads	61	2	
Excavating or earth moving vehicles	51		
Farm implements	41	1	
Relocating structures (grain bins)	4		
Vehicles out of control	112		
Aircraft, parachutes, kites, etc.	4		
Falling, brushing or trimming trees			
a) Utility tree trimmers/workers	11		
b) others	30		
Drilling and seismic equipment	7		
Other inadvertent contacts	11	2	1
Total	369	8	1
Underground Utility Systems			
Excavating equipment	47		
Vehicles hitting transformers, pedestals, etc.	19		
Others	2	2	
Total	68	2	

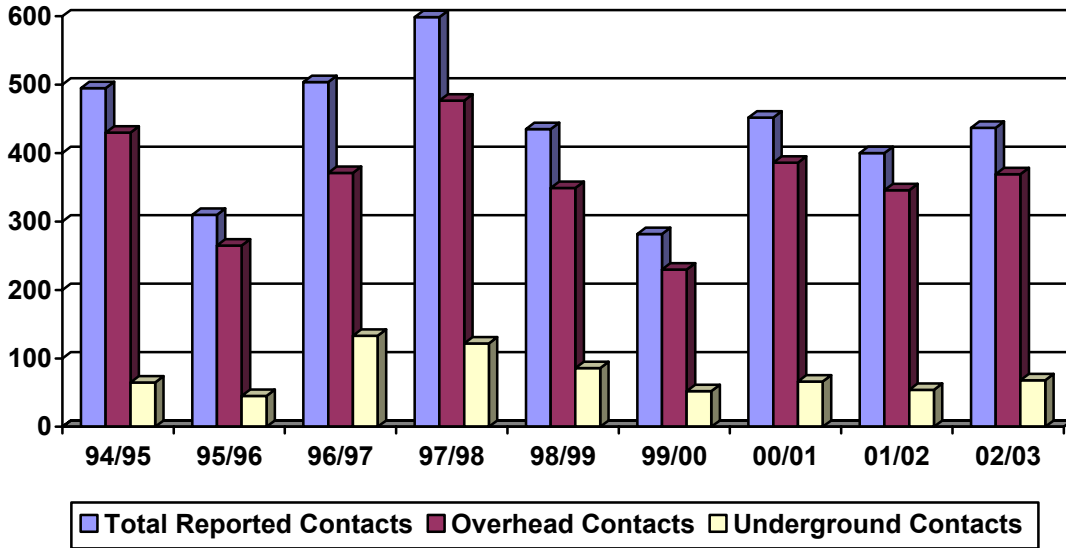
POWER LINES CONTACTS HISTORICAL SUMMARY

	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03
Overhead (O/H) contacts	430	265	371	477	349	230	386	346	369
Underground (U/G) contacts	65	45	133	122	86	52	66	54	68
Total Reported Contacts	495	310	504	599	435	282	452	400	437

Fatalities (O/H contacts)	0	0	1	7	1	1	1	1	1
Fatalities (U/G contacts)	0	0	0	0	0	0	0	0	0
Total Reported Fatalities	0	0	1	7	1	1	1	1	1

Injuries (O/H contacts)	7	2	6	14	15	10	7	7	8
Injuries (U/G contacts)	0	0	0	2	3	0	0	1	2
Total Reported Non-Fatal Injuries	7	2	6	16	18	10	7	8	10

Power Line Contacts Historical Summary April 1 to March 31



Power Line Contacts Injuries Historical Summary April 1 to March 31

