

January 2004

STATISTICS

RE: ELECTRICAL INCIDENTS IN ALBERTA

2003 01 01 to 2003 12 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 January 1, 2003 and December 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 476 incidents were reported: 390 involving overhead power lines, 78 involving underground power lines and 8 involving other types of electrical installations or equipment. Of those, 2 fatalities and 6 injuries were recorded.

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

- (1) **Injury Incidents** – Pages 2 and 3 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 page 3.
- (2) **Power Line Contacts** – Pages 4, 5 and 6 summarize the power line contacts reported. The table on page 4 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 5 and 6, 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
2003 01 01 to 2003 12 31**

1. PERSONS INVOLVED **FATAL (F)
NON-FATAL (N)**

A. Performing electrical work	F	N	B. Not performing electrical work	F	N
1. Qualified electrical worker		1	1. Male		2
2. Qualified power electrician/lineman		2	2. Female		
3. Non-qualified person	1	1	3. Child	1	

2. VOLTAGES INVOLVED

A. Systems or equipment (not power line contacts)	F	N	B. Contact with power lines (not included in A)	F	N
1. 750 volts or less	1	2	1. 750 volts or less		
2. Over 750 volts			2. Over 750 volts	1	4

3. SYSTEMS OR EQUIPMENT INVOLVED

A. Interior wiring systems	F	N	B. Line construction or maintenance	F	N
1. Service/distribution equipment		2	1. Overhead systems (poles, lines, etc.)		
2. Motor control equipment			2. Substations and transformers		
3. Switches, fixtures, etc.			3. Underground systems		2
4. Test equipment			4. Other		
5. General wiring/conductors					
6. Other equipment					

C. Utilization equipment	F	N	D. Non-electrical equipment	F	N
1. Household appliances			1. Cranes/booms/pickers		1
2. Commercial/industrial equipment			2. Ladders/scaffolds		
3. Portable power tools			3. Drilling rig equipment		
4. Extension cords			4. Farm equipment		
5. Welding machines/motors			5. Moving buildings		
6. Mobile homes and trailers			6. Objects (pipe, antennae, etc.)		1
7. Signs			7. Excavating equipment		
8. Other	1		8. Vehicles (high loads, truck boxes, etc.)		
			9. Other	1	

SUMMARY OF INJURY INCIDENTS

Fatal Injuries

- July 1. A youth was electrocuted after contacting a 14.4 kV overhead power line while climbing a tree.
- September 2. A man was electrocuted while attempting to repair a computer.

Non-Fatal Injuries

- January 1. An oilfield hoe operator received second degree burns to his fingers and toe. When loading a tracked hoe onto a truck, the arm of the hoe contacted a 25 kV overhead power line.
2. A maintenance worker received burns to his hands and face as a result of a short circuit in a distribution panel.
- March 3. 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.
4. A worker sustained electrical burns to much of his body as well as subsequent injuries when he fell 5m off of a scissors lift. While installing a sign, the worker raised a metal rod into a 69 kV overhead power line.
- April 5. An electrician received a flash to his eyes and burns to his hands when attempting to insert a piece of cardboard between two pieces of breaker mounting hardware in a 120 /208 V, 3000 A switchboard.

Livestock

- April 1. A cow was electrocuted after contacting a downed 138 kV transmission line.
2. A horse was electrocuted after contacting a downed 14.4 kV overhead power line.
3. A cow was electrocuted when drinking from a stock waterer. An electrical fault had imposed 120 V on the stock waterer.

**REPORTED ELECTRICAL POWER LINE CONTACTS
2003 01 01 to 2003 12 31**

TYPE OF CONTACT OR DAMAGE	# OF LINE CONTACTS	NON-FATAL INJURIES	FATAL INJURIES
Overhead Utility Systems			
Vehicle-mounted equipment (booms, hoists, cranes, etc.)	35	1	
Trucks with raised boxes and vehicles transporting high loads	70		
Excavating or earth moving vehicles	64		
Farm implements	42		
Relocating structures (grain bins)	6		
Vehicles out of control	109		
Aircraft, parachutes, kites, etc.	6		
Falling, brushing or trimming trees			
a) Utility tree trimmers/workers	14		
b) Others	26		
Drilling and seismic equipment	5		
Other inadvertent contacts	13	1	1
Total	390	2	1
Underground Utility Systems			
Excavating equipment	54		
Vehicles hitting transformers, pedestals, etc.	22		
Others	2	2	
Total	78	2	

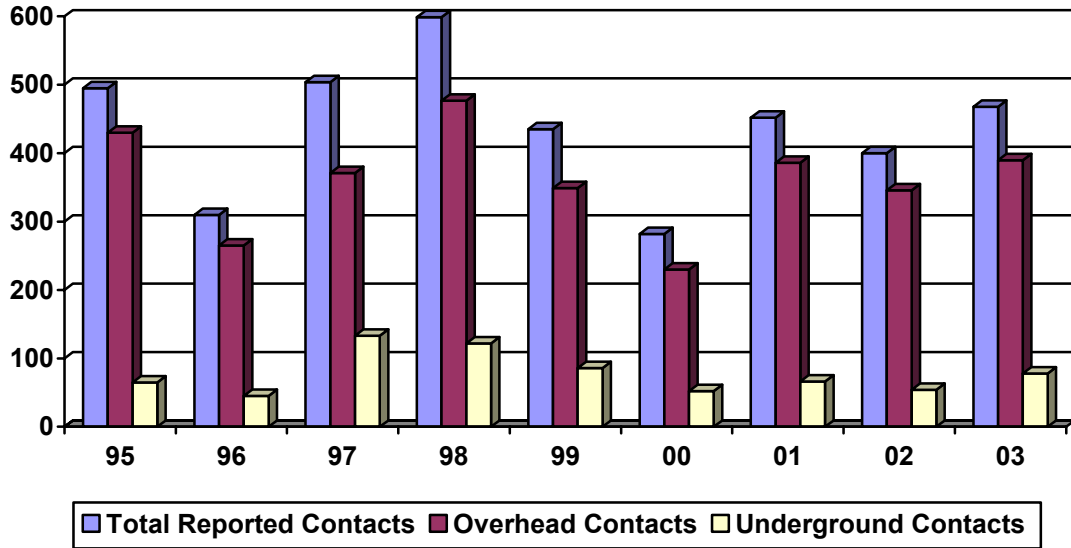
POWER LINES CONTACTS HISTORICAL SUMMARY

	95	96	97	98	99	00	01	02	03
Overhead (O/H) contacts	430	265	371	477	349	230	386	346	390
Underground (U/G) contacts	65	45	133	122	86	52	66	54	78
Total Reported Contacts	495	310	504	599	435	282	452	400	468

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	2
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	4

Power Line Contacts Historical Summary



Power Line Contacts Injuries History

