

January 2005

STATISTICS

RE: ELECTRICAL INCIDENTS IN ALBERTA

2004 01 01 to 2004 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 incidents reported between January 1, 2004 and December 31, 2004. Organizations in the electrical industry may use this information for promoting public awareness of electrical safety risks.

A total of 559 incidents were reported:

- 471 involving overhead power lines
- 79 involving underground power lines
- 9 involving other types of electrical installations or equipment

Of those, 4 fatalities and 9 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. 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. 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; however, it does serve as an approximation and sampling of the various types of incidents.

**INJURY INCIDENTS REPORTED
2004 01 01 to 2004 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	2	2	1. Adult	2	6
2. Qualified power electrician/lineman		1	2. Child		
3. Non-qualified person					

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	3	2	1. 750 volts or less		
2. Over 750 volts		1	2. Over 750 volts	1	6

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		1	2. Substations and transformers		
3. Switches, fixtures, etc.			3. Underground systems		
4. Test equipment			4. Other		
5. General wiring/conductors	1				
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		2. Ladders/scaffolds		2
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	2
7. Signs			7. Excavating equipment		
8. Other			8. Vehicles (high loads, truck boxes, etc.)		1
			9. Other		

SUMMARY OF INJURY INCIDENTS

Fatal Injuries

- April 1. An electrician was electrocuted when providing maintenance service to an electrical box for runway lighting.
- May 2. A worker, employed as a mechanic, was electrocuted while attempting to repair a portable lighting plant.
- August 3. A worker, employed as a corrosion technician, was electrocuted when he contacted 480 V while making checks in a box containing a rectifier system.
- September 4. A man was electrocuted when the 15' mast of his catamaran sailboat contacted a 25 kV overhead power line.

Non-Fatal Injuries

- January 1. A man received first and second degree burns to his hands, neck and face due to an arc flash while working on an electrical panel.
- March 2. A man received burns to his hands and feet when a crane hoisting a precast concrete panel contacted a 25 kV overhead power line.
- June 3. A journeyman received burns to his hand when attempting to remove a 480 V disconnect switch from a motor control center.
- July 4. Two workers received an electrical shock, one of the workers suffered cardiac arrest when the scaffold they were erecting contacted a 14.4 kV overhead power line.
5. Two workers received injuries when the aluminum framed concession stand they were erecting contacted a 14.4 kV overhead power line.
- September 6. A paving raker received electrical burns when the raised box of the dump truck he was working along side contacted a 25 kV overhead power line.
- November 7. A worker received burns to his hands, upper body and face while relay testing on a 4160 V circuit breaker.

**REPORTED ELECTRICAL POWER LINE CONTACTS
2004 01 01 to 2004 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.)	48	1	
Trucks with raised boxes and vehicles transporting high loads	86	1	
Excavating or earth moving vehicles	67		
Farm implements	63		
Relocating structures (grain bins)	9		
Vehicles out of control	124		
Aircraft, parachutes, kites, etc.	4		
Falling, brushing or trimming trees	11		
a) Utility tree trimmers/workers	-----		
b) Others	30		
Drilling and seismic equipment	7		
Other inadvertent contacts	22	4	1
Total	471	6	1
Underground Utility Systems			
Excavating equipment	58		
Vehicles hitting transformers, pedestals, etc.	20		
Others	1		
Total	79		

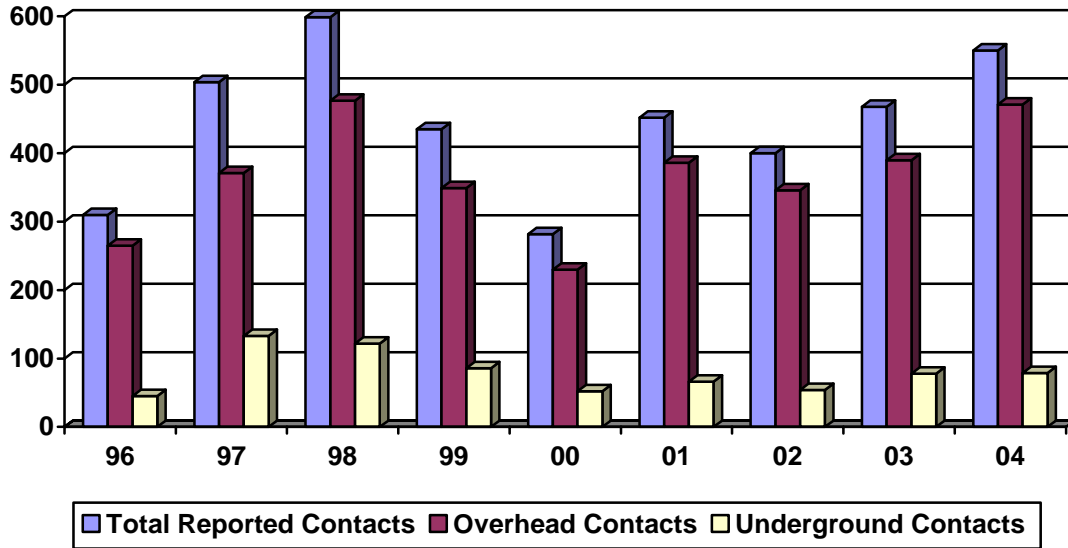
POWER LINES CONTACTS HISTORICAL SUMMARY

	96	97	98	99	00	01	02	03	04
Overhead (O/H) contacts	265	371	477	349	230	386	346	390	471
Underground (U/G) contacts	45	133	122	86	52	66	54	78	79
Total Reported Contacts	310	504	599	435	282	452	400	468	550

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

Injuries (O/H contacts)	2	6	14	15	10	7	7	2	6
Injuries (U/G contacts)	0	0	2	3	0	0	1	2	0
Total Reported Non-Fatal Injuries	2	6	16	18	10	7	8	4	6

Power Line Contacts Historical Summary



Power Line Contacts Injuries History

