

May 2002

## STATISTICS

### RE: ELECTRICAL INCIDENTS IN ALBERTA

2001 04 01 to 2002 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, 2001 and March 31, 2002. Organizations in the electrical industry may use this information for promoting public awareness of electrical safety risks to reduce electrical incidents.

A total of 410 incidents were reported: 346 involving overhead power lines, 54 involving underground power lines and 10 involving other types of electrical installations or equipment. Of those, 1 fatality and 18 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 incidents that happened.

**INJURY INCIDENTS REPORTED  
2001 04 01 to 2002 03 31**

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

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<b>A. Performing electrical work</b>	<b>F</b>	<b>N</b>	<b>B. Not performing electrical work</b>	<b>F</b>	<b>N</b>
1. Qualified electrical worker		5	1. Male	1	10
2. Qualified power electrician/lineman		1	2. Female		
3. Non-qualified person		2	3. Child		

**2. VOLTAGES INVOLVED**

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<b>A. Systems or equipment (not power line contacts)</b>	<b>F</b>	<b>N</b>	<b>B. Contact with power lines (not included in A)</b>	<b>F</b>	<b>N</b>
1. 750 volts or less		9	1. 750 volts or less		1
2. Over 750 volts		1	2. Over 750 volts	1	7

**3. SYSTEMS OR EQUIPMENT INVOLVED**

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

<b>C. Utilization equipment</b>	<b>F</b>	<b>N</b>	<b>D. Non-electrical equipment</b>	<b>F</b>	<b>N</b>
1. Household appliances			1. Cranes/booms/pickers	1	3
2. Commercial/industrial equipment			2. Ladders/scaffolds		
3. Portable power tools			3. Drilling rig equipment		1
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		1
8. Other			8. Vehicles (high loads, truck boxes, etc.)		1
		1	9. Other		1

## SUMMARY OF INJURY INCIDENTS

### Fatal Injuries

Oct/2001 1. A youth on a forklift, trying to retrieve a cat off a power pole, contacted a 14.4 kV overhead power line. It could not be determined if the death was caused by the fall or by electrocution.

### Non-Fatal Injuries

April/2001 1. An electrician received burns to his hand when operating a 400A circuit breaker in a MCC (Motor Control Centre).

May/2001 2. A man received second and third degree burns to his legs and feet when a flagpole he was erecting contacted a 14.4 kV overhead power line.

3. An electrician received a shock after contacting the metal frame of equipment. It was determined an induced voltage was present on the frame of the equipment.

June/2001 4. An apprentice electrician received second and third degree burns to his hands and face when attempting to tighten the terminals on an energized 480 V circuit breaker.

5. An electrician received a shock when he contacted the live terminals of a tie-breaker.

6. A worker received electrical burns to his hand and face when attempting to take meter readings on a 480 V service.

July/2001 7. A person received third degree burns to 30% of his body when his sailboat mast contacted a 25 kV overhead power line.

8. An apprentice electrician received burns to his hand and foot after contacting 13.8 kV terminals while cleaning high voltage switchgear.

Aug/2001 9. A worker received an electrical shock while working in an electrical control box.

10. An oilfield worker received a shock when a mobile flare stack he was touching contacted a 25 kV overhead power line.

11. An oilfield worker received a shock when a truck box was raised into a 25 kV overhead power line.
12. A worker received a shock while operating a gas pipe corrosion testing machine.
- Sept/2001 13. A worker received an electrical shock when he contacted a street light wire when digging post holes.
14. An apprentice electrician received a shock while working on an energized 347 V lighting circuit.
- Oct/2001 15. A worker received burns to his hands from holding on to a winch line when the raised truck boom contacted a 14.4 kV overhead power line.
16. An apprentice electrician received first and second degree burns to his hands and face when the bonding conductor he was terminating contacted bus bars in a 480 V MCC (Motor Control Centre).
- Feb/2002 17. Two workers received undetermined injuries when a forklift used as a work platform was raised into a 25 kV power line.

**REPORTED ELECTRICAL POWER LINE CONTACTS  
2001 04 01 to 2002 03 31**

TYPE OF CONTACT OR DAMAGE	# OF LINE CONTACTS	NON-FATAL INJURIES	FATAL INJURIES
<b>Overhead Utility Systems</b>			
Vehicle-mounted equipment (booms, hoists, cranes, etc.)	71	3	1
Trucks with raised boxes and vehicles transporting high loads	69	2	
Excavating or earth moving vehicles	44		
Farm implements	32		
Relocating structures (grain bins)	6		
Vehicles out of control	72		
Aircraft, parachutes, kites, etc.	7		
Falling, brushing or trimming trees	6		
a) Utility tree trimmers/workers	17		
b) others			
Drilling and seismic equipment	8		
Other inadvertent contacts	14	2	
<b>Total</b>	<b>346</b>	<b>7</b>	<b>1</b>
<b>Underground Utility Systems</b>			
Excavating equipment	38	1	
Vehicles hitting transformers, pedestals, etc.	14		
Others	2		
<b>Total</b>	<b>54</b>	<b>1</b>	

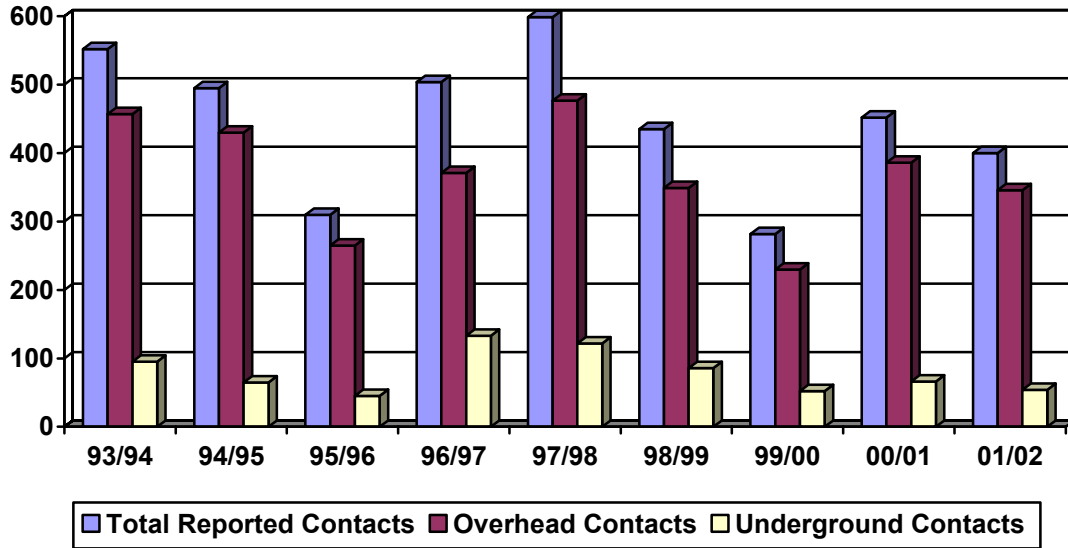
## POWER LINES CONTACTS HISTORICAL SUMMARY

	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
Overhead (O/H) contacts	457	430	265	371	477	349	230	386	346
Underground (U/G) contacts	95	65	45	133	122	86	52	66	54
<b>Total Reported Contacts</b>	<b>552</b>	<b>495</b>	<b>310</b>	<b>504</b>	<b>599</b>	<b>435</b>	<b>282</b>	<b>452</b>	<b>400</b>

Fatalities (O/H contacts)	3	0	0	1	7	1	1	1	1
Fatalities (U/G contacts)	0	0	0	0	0	0	0	0	0
<b>Total Reported Fatalities</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>7</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>

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

**Power Line Contacts Historical Summary  
April 1 to March 31 of the Following Year**



**Power Line Contacts Injuries History  
April 1 to March 31 of the Following Year**

