

## STATISTICS

### ELECTRICAL INCIDENTS IN ALBERTA

January 1 to December 31, 2019

Regulations under the [Safety Codes Act](#) require that all electrical accidents, contacts or fires be reported to the Electrical Administrator. Alberta Municipal Affairs has compiled a summary report of incidents reported between January 1, 2019, and December 31, 2019. Organizations in the electrical industry may wish to use this information for promoting public awareness of electrical safety risks.

Incident reporting forms and statistical reports from previous years can be found on the Alberta Municipal Affairs website at:

<https://www.alberta.ca/electrical-codes-and-standards.aspx>

A total of 770 incidents were reported in 2019:

- involving overhead power lines;
- involving underground power lines; and
- involving other types of electrical installations or equipment

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 is provided on page 3.
- (2) **Power Line Contacts** – Pages 4 to 6 summarize the power line contacts. The table on page 4 shows the different types of power line contacts and the number of fatal and non-fatal injuries incurred for each type of contact. The tables and 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 account 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

January 1 to December 31, 2019

## 1. PERSONS INVOLVED

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

### A. Performing electrical work

1. Qualified electrical worker
2. Qualified power system electrician/powerline tech.
3. Non-qualified person

F	N
	8
	4
	1

### B. Not performing electrical work

1. Adult
2. Child

F	N
	3

## 2. VOLTAGES INVOLVED

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

1. 750 volts or less
2. Over 750 volts

F	N
	7
	1

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

1. 750 volts or less
2. Over 750 volts

F	N
	3
	5

## 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
	2
	1
	1
	1
	1

### B. Utility

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

F	N
	4
	4
	1

### 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

### 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
	1

## SUMMARY OF REPORTED INJURY INCIDENTS

Information provided in this report is information provided by Industry. Any change in wording from the reports received is done for clarification of the incident and to also protect the identity of the individuals involved.

### Non-Fatal Injuries

1. Power line employee receives electrical shock while dealing with ground chain.
2. Worker received an electrical shock from disconnect switch in a substation from induced voltage.
3. Worker received an electrical shock while installing a ground wire in a substation. The station was not energized; however, the voltage was induced into the bus pipe.
4. While positioning a boom to dig a hole the boom came in to contact with an overhead wire delivering an electrical shock to the operator.
5. While hydrovacating to expose a cable, a contractor received an electric shock from a faulted cable.
6. While removing one of the phases off the transformer an arc flash occurred injuring the worker.
7. Homeowner cut down a tree, which hit the power line, and the homeowner received an electric shock.
8. While throwing a test wire over a trench, the wire received an electrical arc from the overhead power line. The worker holding the other end received a shock.

1. **REPORTED ELECTRICAL POWER LINE CONTACTS**

January 1 to December 31, 2019

<b>TYPE OF CONTACT OR DAMAGE</b>	<b># OF LINE CONTACTS NO INJURIES</b>	<b>NON-FATAL INJURIES</b>	<b>FATAL INJURIES</b>
<b>Overhead Utility Systems</b>			
Vehicle-mounted equipment (booms, hoists, cranes, etc.)	37	3	
Trucks with raised boxes and vehicles transporting high loads	60		
Excavating or earth moving vehicles	90		
Farm implements	99		
Relocating structures (grain bins)	0		
Vehicles out of control	131		
Aircraft, parachutes, kites, etc.	8		
Falling, brushing or trimming trees	29	1	
Drilling and seismic equipment	3		
Other contacts	48	2	
<b>Total</b>	<b>505</b>	<b>6</b>	
<b>Underground Utility Systems</b>			
Excavating equipment	153	1	
Vehicles hitting transformers, pedestals, etc.	78		
Others	18	1	
<b>Total</b>	<b>249</b>	<b>2</b>	

## REPORTED ELECTRICAL POWER LINE CONTACTS HISTORICAL SUMMARY

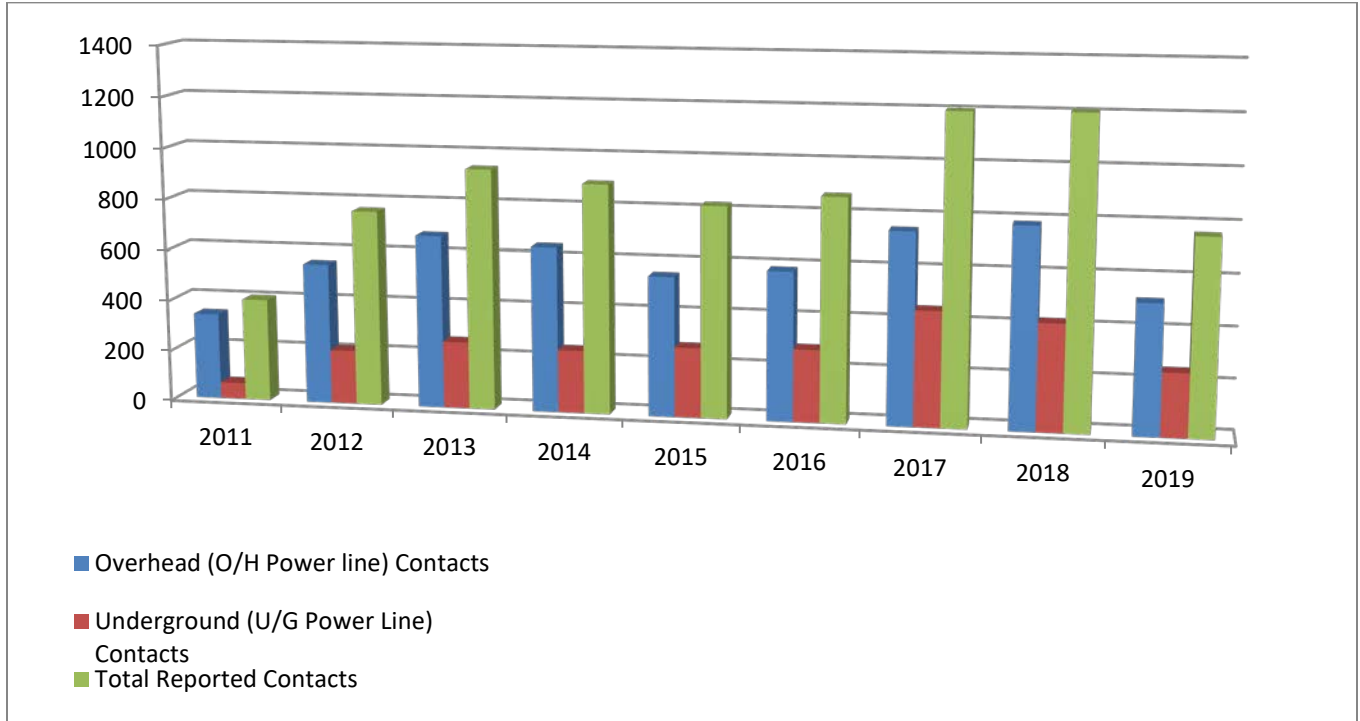
For the Years 2011 to 2019

	2011	2012	2013	2014	2015	2016	2017	2018	2019
Overhead (O/H POWER LINE) contacts	339	551	676	646	548	584	749	784	511
Underground (U/G POWER LINE) contacts	64	213	264	248	276	287	453	422	251
<b>Total Reported Contacts</b>	<b>403</b>	<b>764</b>	<b>940</b>	<b>894</b>	<b>824</b>	<b>871</b>	<b>1202</b>	<b>1206</b>	<b>762</b>

Fatalities (O/H POWER LINE contacts)	2	0	1	0	0	0	2	2	0
Fatalities (U/G POWER LINE contacts)	0	0	0	0	0	0	0	0	0
<b>Total Reported POWER LINE Fatalities</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>0</b>

Injuries (O/H contacts)	4	8	2	5	3	1	4	3	6
Injuries (U/G contacts)	1	4	1	0	1	3	1	2	2
<b>Reported injuries (persons) Non-Fatal ELECTRICAL</b>	<b>5</b>	<b>12</b>	<b>3</b>	<b>5</b>	<b>1</b>	<b>4</b>	<b>5</b>	<b>5</b>	<b>8</b>

### Reported Power Line Contacts - Historical Summary 2011 to 2019



### Reported Power Line Contacts - Injuries History 2011 to 2019

