



# Electrical incidents in Alberta

January 1 to December 31, 2023

*Alberta* 

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Electrical incidents in Alberta | Municipal Affairs

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# Table of Contents

- Electrical incidents in Alberta – 2023 Report ..... 4
  - Incidents reported..... 4
  - Fatalities..... 4
  - Non-fatal injuries ..... 4
- Summary of reported injury incidents – 2023 ..... 6
  - 1. Persons involved ..... 6
  - 2. Voltages involved ..... 6
  - 3. Systems or equipment involved ..... 6
- Reported Electrical Power Line Contacts 2023..... 7
- Yearly Statistics ..... 8
  - Reported Electrical Power Line Contacts in Alberta – 2015 to 2023 ..... 8
  - Reported Power Line Contacts in Alberta– Summary – 2015 to 2023 ..... 9
  - Reported Power Line Contacts in Alberta – Injuries – 2015 to 2023 ..... 9

# Electrical incidents in Alberta – 2023 Report

Regulations under the [Safety Codes Act](#) require 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, 2023, and December 31, 2023. Organizations in the electrical industry may wish to use this information to promote public awareness of electrical safety risks.

Incident reporting forms and statistical reports from previous years can be found online at: [alberta.ca/electrical-standata.aspx](http://alberta.ca/electrical-standata.aspx)

Information in this report is 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.

## Incidents reported

A total of 2,018 incidents were reported in 2023 involving:

- Overhead power lines;
- Underground power lines; and
- Other types of electrical installations or equipment.

The summary beginning on page six presents the information in a series of tables, texts, and charts:

- Injury incidents summarize fatal and non-fatal injury incidents outlining the number of persons, voltages, and equipment involved and a brief description of injury incidents is provided.
- Power line contacts summarize 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 compare historical information with current statistics.
- Since not all incidents are reported, this report underrepresents the incidents that occurred in Alberta. It provides information on the various types of incidents that are reported.

## Fatalities

- A worker was dumping gravel when their bucket contacted a powerline and was fatally injured.
- A worker was using a pressure washer they received an electric shock and was fatally injured.

## Non-fatal injuries

- A power lineman was performing a task on a transformer pole, the worker raised his arm while working and his screwdriver accidentally hit the powerline.
- A worker cut into a pipe with live cables, the worker was exposed to an arc flash, and received burns.
- A worker was leveling concrete when the float pole contacted the powerline resulting in an arc flash injuring to the worker.
- A worker received a minor electric shock while working at a power substation.
- A worker received an electric shock when they touched the positive and negative conductors on a combiner box at the same time.
- A power lineman was performing maintenance on a powerline when they received an electric shock.
- While tree trimming, a tree branch unexpectedly fell opposite of a worker, striking a powerline and the worker's right arm, the worker received an electric shock.
- A worker was using a tool that detects anomalies using electricity, the worker received an electrical shock when setting up the equipment.
- A student was testing voltage when they received an electric shock in their hand.
- A worker received an electric shocked while moving a temporary cable that had been damaged.
- A worker was testing a controller when they received an electric shock.

- An operator went to open a hatch above a motor, when they touched the motor, they received an electrical shock.
- A student accidentally touched the metal of the two conductors and received an electrical shock.
- When a student was disconnecting lab equipment, they received an electric shock.
- A worker received an electric shock from equipment in a wind turbine that was wired improperly.

# Summary of reported injury incidents – 2023

Fatal (F) Non-Fatal (N)

## 1. Persons involved

| <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> |
|--|----------|----------|--|----------|----------|
| Qualified electrical worker                                | 0        | 6        | Adult                                    | 2        | 7        |
| Qualified power system electrician / power line technician | 0        | 2        | Child                                    | 0        | 0        |
| Non-qualified person                                       | 0        | 0        |  |          |          |

## 2. Voltages involved

| <b>A. Systems or equipment<br/>(not power line contacts)</b> | <b>F</b> | <b>N</b> | <b>B. Contact with power lines<br/>(not included in A)</b> | <b>F</b> | <b>N</b> |
|--|----------|----------|--|----------|----------|
| 750 volts or less  | 1        | 9        | 750 volts or less  | 0        | 0        |
| Over 750 volts   | 0        | 2        | Over 750 volts   | 1        | 4        |

## 3. Systems or equipment involved

| <b>A. Interior wiring systems</b>                | <b>F</b> | <b>N</b> | <b>B. Utility</b>                        | <b>F</b> | <b>N</b> |
|--|----------|----------|--|----------|----------|
| Service/distribution equipment                   | 0        | 0        | Overhead systems—poles/lines/etc.        | 1        | 1        |
| Motor control equipment Switches, fixtures, etc. | 0        | 4        | Substations and transformers             | 0        | 2        |
| Test equipment                                   | 0        | 0        | Underground systems                      | 0        | 1        |
| General wiring/conductors                        | 0        | 3        | Other                                    | 0        | 1        |
| Other equipment                                  | 0        | 1        |  |          |          |
|  | 0        | 1        |  |          |          |
| <b>C. Utilization equipment</b>                  | <b>F</b> | <b>N</b> | <b>D. Non-electrical equipment</b>       | <b>F</b> | <b>N</b> |
| Household appliances                             | 0        | 0        | Cranes/booms/pickers                     | 0        | 0        |
| Commercial/industrial equipment                  | 1        | 0        | Ladders/scaffolds                        | 0        | 0        |
| Portable power tools                             | 0        | 0        | Drilling rig equipment                   | 0        | 0        |
| Extension cords                                  | 0        | 1        | Farm equipment                           | 0        | 0        |
| Welding machines/motors                          | 0        | 0        | Moving buildings                         | 0        | 0        |
| Mobile homes and trailers                        | 0        | 0        | Objects (pipe, antennae, etc.)           | 0        | 0        |
| Signs  | 0        | 0        | Excavating equipment                     | 0        | 0        |
|  | 0        | 0        | Vehicles (high loads, truck boxes, etc.) | 0        | 0        |
| Other  |          |          | Other                                    | 0        | 0        |

### Reported Electrical Power Line Contacts 2023

| TYPE OF CONTACT OR DAMAGE                                     | # OF LINE CONTACTS<br>NO INJURIES | NON-FATAL<br>INJURIES | FATALITIES |
|---|-----------------------------------|-----------------------|------------|
| Overhead Utility Systems                                      |                                   |                       |            |
| Vehicle-mounted equipment (booms, hoists, cranes, etc.)       | 75                                |                       |            |
| Trucks with raised boxes and vehicles transporting high loads | 98                                |                       | 1          |
| Excavating or earth moving vehicles                           | 96                                |                       |            |
| Farm implements   | 143                               |                       |            |
| Relocating structures (grain bins)                            | 2                                 |                       |            |
| Vehicles out of control                                       | 299                               |                       |            |
| Aircraft, parachutes, kites, etc.                             | 60                                |                       |            |
| Falling, brushing or trimming trees                           | 156                               | 1                     |            |
| Drilling and seismic equipment                                | 0                                 |                       |            |
| Other contacts  | 575                               | 3                     |            |
| <b>Total</b>  | <b>1504</b>                       | <b>4</b>              | <b>1</b>   |
| Underground Utility Systems                                   |                                   |                       |            |
| Excavating equipment  | 145                               |                       |            |
| Vehicles hitting transformers, pedestals, etc.                | 278                               |                       |            |
| Others  | 74                                |                       |            |
| <b>Total</b>  | <b>497</b>                        |                       |            |

# Yearly Statistics

## Reported Electrical Power Line Contacts in Alberta – 2015 to 2023

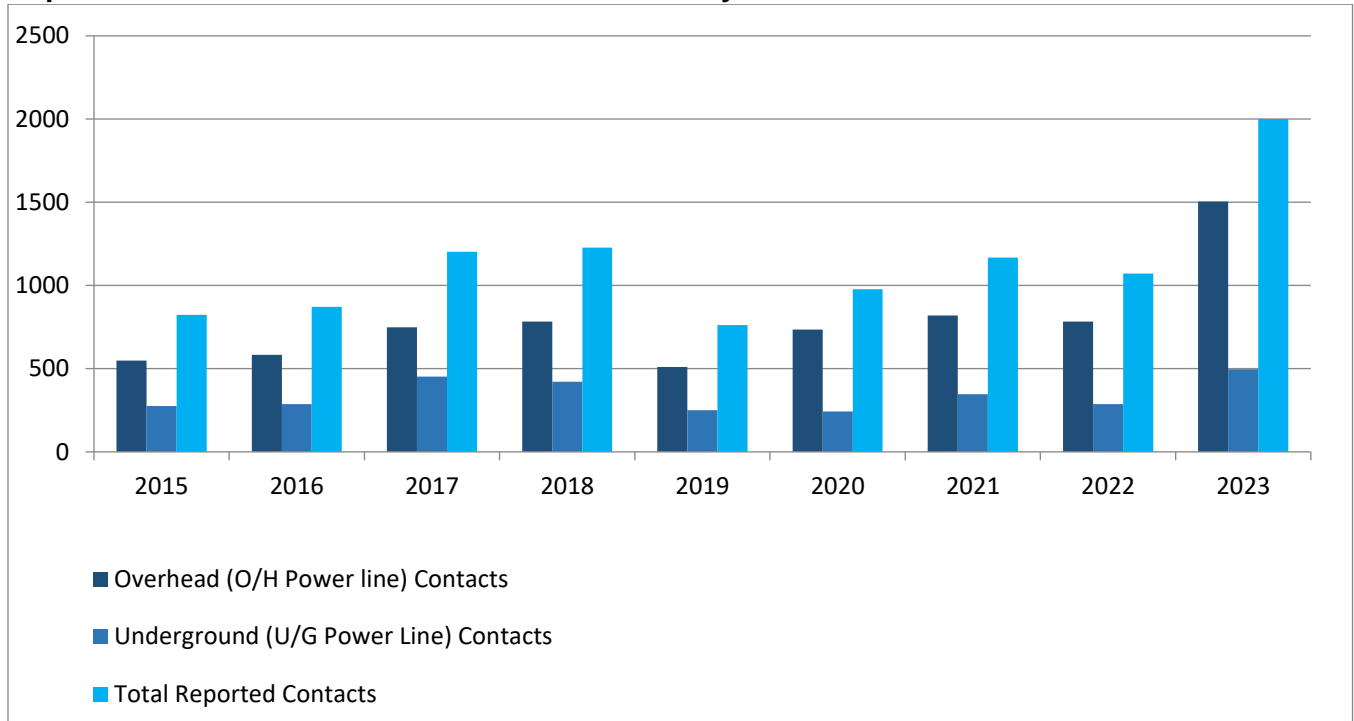
|  | 2015       | 2016       | 2017        | 2018 | 2019       | 2020       | 2021        | 2022 | 2023        |
|--|------------|------------|-------------|------|------------|------------|-------------|------|-------------|
| Overhead power line contacts                               | 548        | 584        | 749         | 784  | 511        | 735        | 820         | 784  | <b>1504</b> |
| Underground power line contacts                            | 276        | 287        | 453         | 422  | 251        | 243        | 347         | 287  | 497         |
| <b>Total reported contacts (no injuries or fatalities)</b> | <b>824</b> | <b>871</b> | <b>1202</b> | 1206 | <b>762</b> | <b>978</b> | <b>1167</b> | 1071 | <b>2001</b> |

|  |          |          |          |          |          |          |          |          |          |
|--|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Fatalities (overhead power line contacts)    | 0        | 0        | 2        | 2        | 0        | 2        | 1        | 0        | <b>1</b> |
| Fatalities (Underground power line contacts) | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | <b>0</b> |
| <b>Total reported power line fatalities</b>  | <b>0</b> | <b>0</b> | <b>2</b> | <b>2</b> | <b>0</b> | <b>2</b> | <b>1</b> | <b>0</b> | <b>1</b> |

|   |          |          |          |          |          |          |          |          |          |
|---|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Injuries (Overhead contacts)                                  | 3        | 1        | 4        | 3        | 6        | 5        | 2        | 1        | <b>4</b> |
| Injuries (Underground contacts)                               | 1        | 3        | 1        | 2        | 2        | 0        | 0        | 0        | <b>0</b> |
| <b>Total reported non-fatal electrical injuries (persons)</b> | <b>4</b> | <b>4</b> | <b>5</b> | <b>5</b> | <b>8</b> | <b>5</b> | <b>2</b> | <b>1</b> | <b>4</b> |



### Reported Power Line Contacts in Alberta– Summary – 2015 to 2023



### Reported Power Line Contacts in Alberta – Injuries – 2015 to 2023

