

**Licensed Occupant Guide:   
Small Connected Devices**

D08-08.3

Revision No: 1.1

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# Scope

## This document details the requirements and instructions in approving the attachment and servicing of *small connected devices* on *poles* and strand mount installations.

## The requirements and instructions in managing and approving Telecommunication Wireline attachments on FortisAlberta Poles are provided in D08-08.1 (external) [B1].

## The requirements and instructions in managing and approving Municipal attachments are provided in D08-08.2 (external) [B1].

## The requirements and instructions in managing and approving Distributed Energy Resources attachments are provided in D08-08.4 (external) [B1].

## The requirements and application process for servicing and attaching *small connected devices* on *poles* and strand mount installations are provided in the Licensed Occupancy Small Connected Devices Attachment Process (external) [B2].

# Purpose

## To provide details and requirements for the safe installation, operation, and servicing of *small connected device* attachments on *poles* and/or on strands to meet applicable codes and regulations.

# Normative References

## Workers shall be competent in FortisAlberta standards:

* D08-08.1 – Licensed Occupant Guide: Wireline Attachments (external) [B1]
* D08-08.2 – Licensed Occupant Guide: Municipal Attachments (external) [B1]
* D08-08.4 – Licensed Occupant Guide: Distributed Energy Resources (external) [B1]
* Licensed Occupancy Wireline Attachment Process (external) [B2]
* Licensed Occupancy Small Connected Devices Attachment Process (external) [B2]
* Limits of Approach for Telecommunications Workers H&S 7.5 (external) [B2]

# Glossary

**Licensed Occupant / Occupancy:** the party that has entered into an agreement with FortisAlberta that allows it to attach its facilities on poles or on strands. The licensed occupant is the Licensee within the Licensed Occupancy Agreement.

**Make Ready Work:** the work required by FortisAlberta in preparing the pole to be ready and fit (compliant to applicable safety code, engineering standards, and by-law) for the required licensed occupant attachment or alterations.

**Pole(s):** Certain electric distribution poles owned by FortisAlberta which are in the area within which FortisAlberta operates its electric distribution system as prescribed by the Alberta Utilities Commission under the Hydro and Electric Energy Act (Alberta), as amended.

**Safety Code 6:** is a document that sets out recommended safety limits for human exposure to radio frequency electromagnetic fields (EMF) in the frequency range from 3 kHz o 300 GHz.

**Small Connected Devices:** Small sized equipment that may include cabinets; security cameras; wireless devices attached on *pole* or strand mounted; antennas; microcell (small cell); base/repeater radios; Wi-Fi/Access points; radar detectors; dual LED obstruction light antenna, and control boxes. Small connected devices usually have loads of up to 1kw, 1phase, 120/240V.

# Legislations

## Alberta Electrical Utility Code (AEUC) (See Annex B)

### The Alberta Electrical Utility Code (AEUC) [B3] provides the rule which applies to activities near overhead power lines and not the movement of persons, equipment, buildings, vehicles, or objects under overhead powerlines.

### A person must contact FortisAlberta, by calling 310-WIRE (9473), before any activities (such as movement of persons, equipment, buildings, vehicles, or objects under overhead powerlines) are undertaken or equipment is operated within 7.0 meters of FortisAlberta’s electric distribution system, to:

1. determine the voltage of the powerline; and
2. establish the safe limit of approach distance as listed in Table 1.

### Table 1, Safe Limits of Approach Distances from Overhead Power Lines for Persons and Equipment

* 0 – 750 V insulated, or polyethylene covered conductors ([[1]](#footnote-1)) 0.3 m
* 0 – 750 V bare, uninsulated 1.0 m
* Above 750 V insulated conductors (1) ([[2]](#footnote-2)) 1.0 m.
* 0.75 kV – 40 kV 3.0 m

NOTE:

1. The minimum separation required between the lowest primary facility and the highest part of the small connected device is 3.6m = 3.0m (safe limits of approach) + 0.6m (head shoulders). Please refer to Section 14.2 and Figure 8.
2. The minimum separation required between the lowest secondary facility and the highest part of the small connected device is 1.6m = 1.0m (safe limits of approach) + 0.6m (head and shoulders). Please refer to Section 14.3 and Figure 8.

## Province of Alberta, Occupational Health and Safety Code

Alberta Occupational Health and Safety Code 2023 [B4] and Explanation Guide provides further guidance on the safe limit of approach distances as specified in the AEUC.

### Safe limit of approach distance, Section 225

* Before work is performed or equipment is operated within 7 metres of an overhead power line, an employer must determine the voltage of the powerline, and establish the appropriate safe limit of approach distance listed in Schedule 4.
* An employer must ensure that the provided safe limit of approach distance is maintained and that no work is done, and no equipment is operated at a distance less than the established safe limit of approach distance.
* Before work is done or equipment is operated in the vicinity of an overhead power line at a distance less than the established safe limit of approach distance listed in Schedule 4, an employer must notify FortisAlberta, by calling 310-WIRE (9473) and obtain assistance in protecting workers involved.
* Schedule 4:

0 – 750V insulated or polyethylene covered conductors ([[3]](#footnote-3)) 0.3 m

0 – 750V bare, uninsulated 1.0 m

Above 750V insulated conductors (3) ([[4]](#footnote-4)) 1.0 m

0.75V – 40kV 3.0 m

NOTE:

1. The minimum separation required between the lowest primary facility and the highest part of the small connected device shall be 3.6m = 3.0m (safe limits of approach) + 0.6m (head and shoulders). Please refer to Section 14.2 and Figure 8.
2. The minimum separation required between the lowest secondary facility and the highest part of the small connected device shall be 1.6m = 1.0m (safe limits of approach) + 0.6m (head and shoulders). Please refer to Section 14.3 and Figure 8.

### Part 20: Radiation Exposure, Section 291, Prevention and Protection

*“If a worker may be exposed to ionizing radiation at a work site, an employer must.*

1. *Develop and implement safe work practices and procedures to be used when the worker works with or approaches the radiation source,*
2. *If practicable, involve affected workers in the development and implementation of the safe work practices and procedures, and*
3. *Inform affected workers of the potential hazards, including reproductive hazards, of ionizing radiation and the radiation source and the precautions to be taken to protect the workers and other persons from those hazards.”*

## CSA C22.3 No. 1-20, Overhead Systems

### CSA C22.3 No. 1-20, Overhead Systems [B5], specifies the Minimum Vertical Separations at a Joint Use structure[[5]](#footnote-5) and working space to allow workers to have access to equipment and conductors and to allow for the installation of the equipment on the structure. FortisAlberta’s interpretation is that these separations do not include the minimum approach distance required by AEUC.

* 0 – 750V supply conductors and Communication line plant 1.0m
* > 0.75kV up to and less than 22kV supply conductors 1.2m
* Luminaires span wires or brackets and communication line plant.
  + Not effectively grounded 1.0m
  + Effectively grounded 0.1m

## CAN/ULC-S801-14-REV1 – Standards on Electric Utility Workplace Electrical Safety for Generation, Transmission, and Distribution

### Section 9, Radio Frequency Hazards

* When work is performed in proximity to communication antennas in the range of 3 kHz to 300 GHz, workers shall not be exposed to radiation levels that exceed Health Canada – Safety Code 6 requirements.
* Employer shall ensure safe work methods are in place to manage exposure limits; RF minimum approach distances; lockout and/or tagging procedures; RF protective clothing; fall protection; climbing plans; rescue training and emergency response; and third-party agreements.

## Safety Code 6: Health Canada’s Radiofrequency Exposure Guidelines

## Safety Code 6 [B9] provides technical information for guiding individuals or groups in their understanding of Health Canada’s radiofrequency (RF) exposure guidelines.

### Uncontrolled and controlled environments

Controlled environments are defined as those that meets the following conditions:

1. The RF field intensities were characterized by means of measurements, calculations, or modelling,
2. The person exposed is aware of the potential for RF exposure and are cognizant of the intensities of the RF field in their environment, and
3. The person exposed is aware of the potential health risks associated with RF field exposures and can control their risk using mitigation strategies.

Situations that do not meet the above conditions are considered uncontrolled environments.

### Safety signs for RF protection

1. Areas

Signs should be used to label areas where RF exposure levels may exceed exposure limits for controlled and uncontrolled areas.

1. Devices

A Caution sign may be used to identify RF energy emitting devices that can produce exposures that can lead to injury from misuse.

A Danger sign may be applied to any device, if it produces exposure levels that pose a risk of immediate and severe injury.

# General Considerations

## The safety of workers, and accessibility, maintainability, security, and reliability of FortisAlberta electric infrastructure are to be paramount.

## Where applicable, *small connected device* must meet CSA C22.3 Part 1 (Overhead Systems), Health Canada Safety Code 6, the Power Utility Standards, and Telecommunication regulation requirements. In cases where requirements overlap, whichever requirement is more stringent shall apply.

## *Small connected device* and electric servicing shall meet the AEUC [B3], Canadian Electrical Code C22.1 [B8], and provision of service shall be as per FortisAlberta’s Service and Metering Guide [B6].

## Application for licensed occupancy attachments shall be on a first permit submission – first served basis. FortisAlberta will not grant the attacher exclusive use, vested rights, or franchise licensed occupancy of its facilities to third party attachers. The attacher is required to share the pole with the Power Utility or other third party attachers. NOTE: **The approved application will be valid for 6 months. If after 6 months no work has been completed the approval will be rescinded.**

# Rates, Riders, and Options

## Option D Flat Rate is a rate option available for servicing *small connected device* with load requirements that are predictable. If the loads change over time or if the loads are no longer predictable, FortisAlberta may meter the service at the customer’s cost and bill accordingly at FortisAlberta’s discretion.

## Virtual Aggregation Billing

*Small connected devices* may qualify for aggregate billing under one site ID with the following restrictions:

1. The device must be attached to the *pole*.
2. The device has an electrical load requirement of less than 1kw.
3. Devices of the same type and located within the same municipal service area (i.e., municipality, town, hamlet).   
   NOTE: Devices located in different municipal service areas will each have its own site ID for separate aggregated billing.
4. The device must be approved by FortisAlberta.

# General Requirements

* 1. Compliance to FortisAlberta Standards, Codes, and Regulations
     1. Licensed occupant proposing to attach on FortisAlberta poles are responsible to comply with the latest edition of the Alberta Electric Utility Code and other regulations with jurisdiction over the proposed attachment on *poles*.

### The licensed occupant shall be responsible to utilize competent workers, as per Occupational Health and Safety Code – Alberta Regulation 191/2021 and other applicable requirements. The licensed occupant shall install their *small connected devices* within the space as approved by FortisAlberta while respecting the applicable electrical safe limits of approach.

### Electrical services associated with the installation of *small connected devices* on FortisAlberta structures shall meet FortisAlberta standards, and all applicable provisions of Alberta Electrical Utility Code (AEUC) [B3] and Canadian Electrical Code C22.1 [B8].

* 1. Licensed Occupancy Agreement [B7]
     1. Licensed occupancy agreement is an agreement between FortisAlberta and the Licensed Occupant, where the latter wishes to install equipment on poles and/or on strand, and FortisAlberta is agreeable upon the terms and conditions contained in this agreement.
     2. Licensed occupant proposing to attach on FortisAlberta’s electric distribution poles and/or on strand, that are commercial in nature, shall complete and maintain a licensed occupancy agreement with FortisAlberta prior to any work or attachment is made on FortisAlberta poles or on Licensed Occupant strand.
     3. To obtain more information, please contact FortisAlberta’s Contracts Services Department   
        (e-mail: licensedoccupancy@fortisalberta.com).
     4. **Disclaimer:** If there is any discrepancy between any provision of this Licensed Occupancy Guide and any provision of the Licensed Occupancy Agreement, the provisions in the Licensed Occupancy Agreement shall prevail.
  2. Approvals

### Municipal Approval

FortisAlberta maintains an Electric Distribution System Franchise Agreements [B10] with certain municipalities in its service area.

FortisAlberta is required to direct the licensed occupant, proposing to attach on FortisAlberta poles located within the local municipal service area or right of way, to obtain the local municipal approval.

The licensed occupant proposing to attach on FortisAlberta’s electric distribution poles and/or on strand shall obtain the local municipality approval and to provide a copy of the municipal approval to FortisAlberta representative.

### Electrical Permit or Connection Authorization Form

The local inspection authority may or may not issue an electrical permit for small connected devices attached on FortisAlberta poles. As such, the licensed occupant shall check with the local municipality/inspector if they would grant an electrical permit. If the electrical inspector will issue an electrical permit, the electrical permit or inspection certificate shall be submitted to FortisAlberta prior to attaching devices to FortisAlberta poles or streetlights.

In the absence of an electrical permit or inspection certificate (where the permitting authority does not provide permit or inspect electrical service installations on Poles), the licensed occupant shall sign a [Connection Authorization Form](#ConnectionAuthorizationForm) (See Annex C) – indicating that the licensed occupant installation is okay to be connected to the electric distribution system. Completed Connection Authorization Form shall be submitted to FortisAlberta prior to attaching devices to FortisAlberta poles or streetlights.

### Other applicable approvals (i.e., land use, environmental permits, etc.) which may be identified and required by FortisAlberta.

### The licensed occupant shall complete the [Licensed Occupancy Small Connected Device Application Form](https://www.fortisalberta.com/docs/default-source/default-document-library/licensed-occupancy-small-connected-device-application-form_.docx?sfvrsn=52ce9b1b_3) (link) as part of their application.

## Applicable Fees

The licensed occupant shall be responsible for any applicable fees as per the “[Licensed Occupancy: Schedule of Fees](https://www.fortisalberta.com/docs/default-source/default-document-library/licensed-occupancy---schedule-of-fees.pdf?sfvrsn=e5dc9c1b_11)” (link).

# Supply of Licensed Occupancy Pole

## If a new licensed occupancy pole is required to attach *small connected devices*, a request can be made to have FortisAlberta supply and install it.

### The licensed occupant shall be responsible to pay for the associated costs of installing the new pole.

### The pole installation is subject to applicable laws, approvals, land rights and engineering requirements.

### The pole locations are restricted to acceptable locations within government road allowances and utility right of ways as determined by FortisAlberta. FortisAlberta will not supply and install a pole on private property; in a location that requires regular land access costs; or one that has accessibility concerns.

### The addition of a pole may affect the adjacent structures, such as with uplift issues or additional loading. As such, the customer shall pay the required changes in the system in accommodating this new licensed occupancy pole.

# Load Center and Standard Servicing

## FortisAlberta will supply and install the load center on the pole. The load center must be rated for outdoors, single phase, 2Wire, 15A, 120/240V AC system.

## The standard service voltage for *small connected devices* is 120V, 1-Phase, 2Wire.

A picture containing text, indoor

Description automatically generated A picture containing text, indoor

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Figure 1: Load Center: showing the Line, Neutral, and Ground connections in the load center.

# Recommended and Restricted Poles for Licensed occupancy Attachments

## Recommended poles for licensed occupancy attachments

1. Streetlight poles – for the intent of this document, streetlight poles shall refer to underground fed steel streetlight poles. Streetlight poles are available for licensed occupancy unless identified as restricted in the following sections. Streetlight poles are to be inspected, evaluated for structure loading, and appropriateness before giving approvals to attach.

NOTE: Streetlight poles are not to be used for licensed occupancy wireline attachments (such as telecommunication cables) as these streetlight structures are not intended to support these wireline attachments.

1. Tangent wood poles (simple framing for supporting conductors without guying or dead ends) usually provide better clearances and space for licensed occupancy attachments. These may include single phase transformer on tangent pole. Due to operational reasons, two thirds of the pole typically must be free for climbing, which restricts some pole types. Wood poles are to be inspected, evaluated for structure loading and appropriateness before giving approvals to attach.

## Restricted poles for licensed occupancy attachments

1. Streetlight poles with existing licensed occupancy attachments (including previously approved attachments) will require a re-evaluation of the integrity of the structure and a new approval from FortisAlberta.

NOTES: Streetlight pole structure analysis are usually completed by FortisAlberta’s streetlight pole manufacturer. Thus, details of new and existing licensed occupancy attachments on the streetlight pole shall be obtained and gathered for evaluation. Any additional cost of evaluations will be attributed to the customer.

1. Streetlight poles with visible signs of rusts and dents. Rusts and dents affect the integrity of streetlight poles. Streetlight poles with rusts and dents, as verified in the field, shall be replaced when required for licensed occupancy attachments.

A pole with a sign on it

Description automatically generated A metal pole with a base

Description automatically generated

A post with a sign attached to it

Description automatically generated A metal pole with a white circle around it

Description automatically generated

Figure 2 – Existing attachments (Top Left), Breakaway Pole (Top Right), Direct buried (Lower Left), Dented Pole (Lower Right)

1. Streetlight poles on breakaway bases - licensed occupancy attachments are not allowed. Streetlight poles on breakaway bases are intended to improve traffic safety and are not meant to handle the additional structure loading of a licensed occupancy attachment. Breakaway bases are not to be replaced with standard bases, for the purpose of allowing licensed occupancy attachments, due to its intended purpose and use (which is for lighting and traffic safety).
2. Direct buried streetlight poles – licensed occupancy attachments are not allowed unless replaced. Direct buried streetlight poles are old standard structures and will have to be replaced when required for licensed occupancy attachments. The actual condition of the portion of streetlight pole buried underground is unknown unless verified and tested. Thus, additional loading on the structure may cause the structure to fail.
3. Wood poles with equipment, or switching devices (primary underground risers, jumpers (hot-line clamps), regulator banks, MVIs, capacitor banks), no attachments are allowed. The licensed occupancy attachment will restrict maintenance and operations work on these normally accessed structures.

A telephone pole with electrical wires and text

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Figure 3: (RESTRICTED) Pole with multiple equipment. Minimum vertical separations required at the pole.

# Small Connected Devices

## *Small connected devices* attached on FortisAlberta poles typically include Wi-Fi devices, security cameras, and telecommunication small cells.

A close-up of a street light

Description automatically generated Several cameras on a pole

Description automatically generated A picture containing outdoor, tree, sky, electricity

Description automatically generated

Figure 4 – Wi-fi Device (Left), Security Cameras (Center) and Telecommunication antennae (Right)

## Licensed occupancy equipment and devices shall be installed in accordance with all applicable codes and regulations.

## Equipment and devices shall only be attached below the licensed occupancy zone of a wood pole. They are not to be attached between the primary and secondary space of the licensed occupancy wood pole. Refer to Figure 6.

## If existing power and communication zones space allocations are different than shown in Figure 6, a request may be made to FortisAlberta to make adjustments on the existing height of attachments to allow for the installation of the small connected device on the pole.

## Pole straps must be used when attaching equipment and devices on streetlight poles.

## Third party equipment and devices shall be attached on stand-off brackets (using pole straps or screws/bolts) on wood poles to allow access (be able to climb the pole to access supply facilities). Two-thirds of the circumference of the pole shall be kept free to allow workers to climb up the pole.



Figure 5: Small Connected Devices and risers placed on straps and stand-off brackets, accordingly.

## The minimum height of attachment to the bottom of the load center on the pole shall be three meters from ground. The minimum separation between the top of the load center and the bottom of the small connected device shall be 1.0m.

## Prudent avoidance (Safety Code 6 exception limits) should be applied to specific existing facilities in proximity (e.g., < 5m to sensitive or high occupancy facilities such as schools, childcare centres, long term care facilities, hospitals, and residential buildings).[[6]](#footnote-6)

# Drilling on Streetlight Poles

## Where streetlight poles do not have a provision of nipple (usually the older streetlight structures), drilling on streetlight poles may be allowed when providing an electric service to a small connected device attached on the pole.

NOTE: FortisAlberta will complete the required drilling on the streetlight pole.

## Where streetlight poles have a nipple, the use of this nipple should be used where practicable and avoid further making holes on the pole.

## Only streetlight poles of good standing (no dents, no rusts, not leaning, etc.) are allowed for drilling when providing services to small connected devices on the streetlight pole.

## When drilling the streetlight pole, use a 7/8” steel step drill bit and paint the hole with a galvanized paint.

A close-up of a metal pole

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Figure 6: Drilled hole on a streetlight pole and painted with a galvanized paint.

# Licensed occupancy Poles and Vertical Separations at the Pole

## The typical Space Allocation for services on FortisAlberta Wood Structures.

A diagram of a telephone wire

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Figure 7 – Typical Space Allocation for Services on FortisAlberta Wood Structures

## The required separations between the lowest primary supply facilities and the highest small connected device facility shall be a minimum of **3.6m**.

## The required separations between the lowest secondary supply facilities and the highest small connected device facility shall be a minimum of **1.6m**.

A diagram of a tower

Description automatically generated

Figure 8: Diagram showing telecommunication equipment and a 3.6m safe limits of approach (includes minimum 3.0m limits of approach distance + 0.6m head and shoulders).

## The required vertical separations will help ensure the minimum limits of approach to the nearest primary and secondary supply facilities are maintained by the Telecommunication worker on the pole.

# Small Connected Device on FortisAlberta Pad-mounted Equipment

## Small connected devices on FortisAlberta pad-mounted equipment are not allowed. This is to facilitate operations and maintenance of FortisAlberta equipment without obstruction and to avoid 3rd party facilities being damaged on this process.

A metal box attached to a metal pole

Description automatically generated

Figure 9: (NOT ALLOWED) Small connected device attached on pad-mounted equipment.

# Connections, Shutdown, and Notifications for Equipment & Devices

## Electric Service Connections

### Licensed occupancy requests for equipment and devices mostly require an electric service. Electric service requests for licensed occupancy equipment and devices will be delivered as a commercial service and not metered.

### Electric supply connections must be completed as follows:

### For devices which emits non-ionizing frequencies (such as small cell radios) – such devices shall be serviced using a load center (disconnect switch).

### Devices not emitting non-ionizing frequencies (such as security cameras, etc.) – such devices could be serviced with a load center, a weatherproof receptacle, or an ancillary tap (connected at the photo eye of the luminaire).

### FortisAlberta will supply and install the power supply devices (load center, weatherproof receptacle, ancillary tap).

### The costs of supplying and installing the power supply devices would be attributable to the licensed occupant.

### Local authority inspection certificate and Site IDs are required for each point of service prior to connection of any licensed occupancy device and equipment to the FortisAlberta’s electric distribution system.

A picture containing sky, outdoor, street, sign

Description automatically generated A picture containing sky, outdoor, tree, plant

Description automatically generated A picture containing text, sky, case, accessory

Description automatically generated

Figure 10 – Load Center on Wood (Left); Load Center on Streetlight (Middle); streetlight with a nipple.

## Servicing and Demarcation Points

### The demarcation point of electric service shall be at the FortisAlberta supplied and installed power supply devices.

### The customer shall be responsible to supply and connect the load side service conductors at the load side of the load center.

### On wood and streetlight poles, the load side service conductors shall be installed in PVC or liquid tight flexible conduits (i.e., mechanical protection), placed on stand-off brackets, and shall be continuous from the load center up to the customer’s device.

### The distribution system shall be designed and built to meet cable ampacity and voltage drop requirements. Where these requirements are not met, modifications or upgrades may be needed before connecting these loads in the system. All needed upgrades will be attributed to the customer.

## Shutdown Procedures for equipment and devices emitting non-ionizing radio frequencies.

1. A power line technician or any worker performing work on the pole, must first turn the breaker in the load center to the “OFF” position.
2. After work on the pole is complete, the power line technician or any worker performing work on the pole, must turn the disconnect switch of the licensed occupancy equipment or device back to the “ON” position.

## Customer Notification of Outage

### Pre-planned Outages (PPO) and Non-Emergency work

1. The customer must provide an e-mail address to their retailer. The customer must ensure each attached device has a label identifying owner, contact phone number, and device identifier.
2. During a pre-planned outage, the customer will receive an automated e-mail from FortisAlberta’s PPO desk two days before the planned interruption date.
3. The automated e-mail will contain the following information: Legal land location of the service; closest town or city; Site ID; outage date and time; and reasons for outage.

NOTE: The customer will have to use their Site ID information to identify the location of their device affect by the PPO.

### Emergency (power down)

1. FortisAlberta will not notify the customer in a power down condition.
2. Power loss due to a power down will typically be reported to FortisAlberta through customer calls.
3. FortisAlberta will only advise the customer of a power interruption after the customer calls FortisAlberta through 310-WIRE.

## Back-up power devices

### Customer devices and equipment attached on Poles are not allowed to have back-up power (e.g., battery). Note: A downed pole may not stop a device with back up power from operating, of which may cause hazards to utility workers and public.

# Use of 3 kVA transformer servicing SCDs

## A 3 kVA transformer may be used to supply service to *small connected devices* that meets the following conditions:

1. Cross-country, rural, and hard to reach areas (e.g., not accessible by vehicle trucks); and
2. Unlikely to serve future customers (i.e., residential).

NOTE: 3 kVA transformers are to be attached at the same height of attachments for typical single-phase transformers (i.e., 1800mm for single-phase structure or 2350mm for three-phase structure).

# Mapping of FortisAlberta Electrical Facilities

## FortisAlberta electrical facilities mapping information may be obtained as follows:

1. Through Altalis.com website. Annex A provides information in obtaining mapping information of FortisAlberta electrical facilities through Altalis.com.
2. Through FortisAlberta. Please send a request to FortisAlberta Licensed Occupancy Team ([licensedoccupancy@fortisalberta.com](mailto:licensedoccupancy@fortisalberta.com)).

##### FortisAlberta’s Facilities through Altalis.com (Informative)

FortisAlberta’s mapping of electrical facilities are available through the [www.altalis.com](http://www.altalis.com). The customer requesting for mapping information of FortisAlberta’s existing electrical facilities within an area should be directed to the [www.altalis.com](http://www.altalis.com) website.

The following steps will guide the customer to gather FortisAlberta’s mapping information:

1. Click on the link [www.altalis.com](http://www.altalis.com)
2. Click “Infrastructure”

A screenshot of a computer

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1. Click on “Electrical”

A screenshot of a mobile application

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1. Click on “Fortis Facility Data”

A screenshot of a phone

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1. Select the area of interest by clicking on “Select” and “Rectangle” or “Polygon.”

A screenshot of a computer

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1. Click and drag the cursor to identify the area of interest.

A map of a train

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1. Click “Add to Cart” located at the bottom right corner of the screen.

A green button with white text and blue objects

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##### Alberta Electrical Utility Code (AEUC), 6th Edition (Normative)

This annex contains some applicable code clauses. Refer to the full AEUC for more details.

*2-012 Interference with Systems*

*(1) No person shall interfere with, tamper with, or willfully damage electrical utility systems covered by this Code.*

*(2) Electrical utility system poles and structures shall be kept free of all materials and equipment not required for the system, unless permitted by the operator of the utility system.*

*(3) No person shall make attachments to electrical utility system poles and structures unless authorization has been received from the operator of the utility system.*

*(4) No person shall climb electrical utility system poles or structures or make connections or disconnections to electrical utility system equipment unless the person has been authorized to do so by the operator of the utility system.*

*(5) No person shall enter an electrical utility system generating station, substation, subsurface chamber, equipment room, or similar location unless that person is authorized to enter by the operator of the utility system.*

*2-014 Activities near Overhead Power Lines (See Appendix B.)*

*(1) This Rule applies to activities near overhead powerlines and not the movement of persons, equipment, buildings, vehicles, or objects under overhead powerlines.*

*(2) A person must contact the operator of the utility system before activities other than those in Subrule (1) are undertaken or equipment is operated within 7.0 meters of an energized overhead line to:*

*(a) determine the voltage of the power line; and*

*(b) establish the appropriate safe limit of approach distance listed in Table 1.*

*(3) Except as provided for in Subrule (4), a person must ensure that the safe limit of approach distance, as established in Subrule (2), is maintained and that no activities are undertaken, and no equipment is operated at distances less than the established safe limit of approach distance.*

*(4) A person must notify the operator of the utility system before activities are undertaken or equipment is operated in the vicinity of the power line at distances less than the safe limit of approach distances listed in Table 1 and obtain the operator’s assistance in protecting persons involved.*

*(5) Notwithstanding Subrules (1) through (4), Table 1 does not apply to utility workers falling under the OH&S Code, Part 40 Utility Workers – Electrical.*

*(6) A person must ensure that earth or other materials are not placed under or beside an overhead power line if doing so reduces the safe clearance to less than the Minimum Vertical Design Clearances above Ground or Rails as defined in Table 5 of this Code and the safe limit of approach distances listed in Table 1.*

*(7) A person must follow the direction of the operator of the utility system in maintaining the appropriate safe clearance when conducting activities near an overhead power line.*

*(8) If an activity is being carried out near the safe limits of approach distances specified in Table 1, the person completing the activity shall assign a competent person to act as an observer whose only responsibility is to ensure that the safe limit of approach distances will be maintained.*

*(9) A person shall not excavate or perform similar operations in the vicinity of an overhead or underground power line if it reduces the electrical and structural integrity of the power line including associated grounding equipment.*

##### Connection Authorization Form



Timeline

Description automatically generated

##### Bibliography (Informative)

[B1] FortisAlberta, D08-08.1 through D08-08.4, Licensed occupancy related standards. Available for external third-party licensed occupancy communication parties.

[B2] FortisAlberta Licensed Occupancy processes and Limits of approach for telecommunication workers as posted in the [FortisAlberta.com](https://www.fortisalberta.com/) website.

[B3] Alberta Electrical Utility Code (AEUC), 6th Edition, Summer 2022

[B4] Alberta Occupational Health and Safety Code, March 31, 2023

[B5] Canadian Standards Association (CSA) C22.3 No.1-20, Overhead Systems

[B6] FortisAlberta’s Service and Metering Guide. Available in the FortisAlberta external website.

[B7] Licensed Occupancy Agreement

[B8] Canadian Electrical Code C22.1

[B9] Safety Code 6

[B10] Electric Distribution System Franchise Agreements

[B11] APEGA, Professional Practice Standard, Authenticating Professional Work Products

[B12] CEA Guidelines on Joint Use Poles with Wireless Attachers

[B13] APEGA Professional Practice Bulletin – Authentication Requirements for As-Built, Record, and As-Acquired Drawings (February 2023 version latest at publication date).

FortisAlberta Standards can be found from The Wire by choosing ‘Our Company’, ‘Safety’, then ‘Standards Database’, or by selecting ‘Applications’, then ‘Standards Database’. The search function can be used to find Standards Documents. Select ‘Standards Documents’ on the left menu to view all available Standards Documents. Standards made available to contractors can be found using FortisAlberta’s Contractor Portal at <https://workingwith.fortisalberta.com/>.

Revision Tracking Table

|  |  |  |
| --- | --- | --- |
| **Rev** | **Date** | **Summary of Changes** |
| 0 | March 3, 2022 | Document created. |
| 1.0 | July 27, 2023 | Additional Code requirements captured and updated. General housekeeping - moved process related information to the Licensed Occupancy Small Connected Devices Attachment process document. |
| 1.1 | December 12, 2023 | Section 5.1 and 5.2 – added clarification on minimum separations between SCD and electric distribution facilities.  Section 8.2 – updated licensed occupancy contact information.  Section 8.3.2 – clarification requirement between electrical inspection permit vs. connection authorization form.  Section 8.3.4 – provided new SCD application form.  Section 8.4 – applicable fees are now referenced to the published schedule of fees.  Figure 2 – updated.  Figure 3 – updated.  Section 11.2 – Updated requirements on restricted wood pole structures. Removed underground services and added hot line primary jumpers.  Section 12: Removed limit of maximum number of SCD services allowed.  Section 13: Drilling on streetlight poles.  Figure 7: Updated.  Section 14: added clarification on minimum separations between SCD and electric distribution facilities.  Section 15: SCD on padmount equipment not allowed.  Section 16: Electric service connections and demarcation points updated.  Section 18: Mapping of FortisAlberta facilities updated. |

1. () Conductors must be insulated or covered throughout their entire length to comply with these groups. [↑](#footnote-ref-1)
2. () Conductors must be manufactured to rated and tested insulation levels. [↑](#footnote-ref-2)
3. () Conductors must be insulated or covered throughout their entire length to comply with these groups. [↑](#footnote-ref-3)
4. () Conductors must be manufactured to rated and tested insulation levels. [↑](#footnote-ref-4)
5. () Table 23, Minimum Vertical Separations at a Joint Use Structure, CSA C22.3 No. 1-20. [↑](#footnote-ref-5)
6. CEA Guidelines on Joint Use Poles with Wireless Attachers [B12] [↑](#footnote-ref-6)