

## 2021 CEC CODE ROLL OUT SESSION

### Contractor Questions

- 1. It was stated that pre-energization inspections are required for services and feeders over 400A. Is this only for Main services? Or does this apply to any feeders on a project?**

Effective 2021 Code cycle, the call should be made to your electrical Inspector to arrange for the pre-energization inspection for all services and feeders over 400 amps. The previous wording was over 600 amps, but we required inspection on equipment rated at 600 amps and above. Changing the wording to over 400 amps was required to catch the 600-amp apparatus being utilized for 500-amp installations.

Talk to your Inspector when making the call for the pre-energization inspection, they will decide to what degree they will inspect feeders.

- 2. How are installations of Power Over Ethernet (POE) being inspected by the inspectors? How are you monitoring this regarding non-electrical contractors doing POE projects? I understand the permitting and have no problem with that but how are we going to be able to compete with someone not required to be permitted or are they required to pull permits as well?**

All POE projects require permitting. When an Inspector attends a site, and the POE installation has not been permitted, Inspections have the power to enforce penalties as per the Electrical Inspections Act.

- 3. Will main services under 400 amps in a renovation type situation (typically completed in one day) require a pre inspection?**

Under 400 amps does not require a pre-inspection. We recommend calling your inspector ahead of time, allowing them to decide if they want to see your system bonding and grounding.

- 4. Where can I get a new contractor sticker book? I only have 1 sticker left.**

Contact SaskPower to obtain more contractor stickers.

- 5. Where were the rest of the rules on watering bowls for livestock?**

10-700 of the 2021 CEC.

**6. Regarding services 200A or less on dwelling units, underground installations will have the isolated neutral connected to the ground electrode? Overhead, services the isolated neutral connection is still at the weather head?**

- Connection from ground to neutral is made in meter socket, if the neutral bus is of isolated type, you need to jumper from ground to that isolated neutral bar.
- The utilities will not make connections from bond to the neutral at the top of the mast anymore.

**7. Can you get a copy of your permit or could tell me how to search for permits online?**

If you contact TSASK, we will help walk you through it.

**8. Will ratio compliance be a priority for TSASK? Has there been any discussion on applying for compulsory status for the line trade in Saskatchewan?**

Ratio is monitored by Apprenticeship and trades. We assist if there appears to be a concern but that is not in our purview.

As for the Line Trade that would also be up to their trade board and in discussion with the Apprenticeship and Trades.

**9. How far do you go with the knob and tube wiring?**

You must replace just what you expose, however, you must ensure a safe transition and reconnection.

**10. Regarding energize sticker booklets: I just had another contractor asking if he could have one of my stickers for an energization for a service. As his booklet was stolen when his truck was broken into. Am I allowed to give him one or are the numbers linked to my account even though he will have his own permit?**

They are assigned but not tracked. Make a note that you gave him one in your book and to who you gave it to.

**11. Regarding the ground no longer going up the mast. When does that take effect?**

November 1, 2021.

**12. Will, there be changes on invoicing for permits, our company is wondering if there is going to be an option to be invoiced monthly off our inbox shopping cart instead of making single payments for each permit with a credit card?**

The contractors have control over how their monies are spent, and when. If they want to pay per permit they can, or if they want to save them for a day or maybe even a week, they can also do that.

Monthly, however, may put contractors into an unreported work situation and that costs even more.

**13. Just to confirm, we are now bonding the neutral conductor in the meter socket and not at the top of the mast, and we no longer need to run a bond wire up the mast?**

That is correct. We are grounding the neutral in the meter socket regardless of overhead or underground.

**14. Regarding a farm: Power was run to the farmhouse using USEB about 400ft away from the F-cabinet. They would still like power in the area so moving this cable back some to a relocated house closer to the F-panel. Can we still just drop a ground plate at this new panel location, or would we now have to run a separate ground wire all the way back to the meter/ F-cabinet?**

You would now need to run a bond back to the system at the F-cabinet.

**15. Are neutral wires required in every light switch box?**

Yes. This has been required since Jan 1, 2019.

**16. Does the customer wire between the meter and the panel need to be run down to the weeping tile?**

Yes, and buried in screened sand as per the CEC requirements.

**17. How do you only ground one side of ACWU or Teck if both sides are connected to grounded steel boxes?**

When required, due to single conductor cables required at amperages per conductor being over 200 amps, non-ferrous and/or fiber plates are required for landing the connectors. See page 31 of the 2021 Saskatchewan Interpretations for more details.

**18. On ACWU or Teck, are we required to have a grounding bushing and plastic bushing?**

ACWU and Teck are two different things. Teck has an inner sheath. ACWU does not have the inner sheath and therefore a plastic anti short bushing is required. If they are used for service conductors, then bonding bushing is also required on the connector.

**19. Do we need permits on 12vdc permanent soffit lighting if the control box/power supply is approved to a CSA standard?**

Yes

**20. Do we need to seal from a div 2 to a general location now?**

Let's assume you mean Zone 2: If in conduit yes you will require a flammable fluid migration seal. Not with cable, however, for Div 2 follow Appendix J.

**21. Can I purchase a paper copy of the 2021 Saskatchewan Interpretations?**

Paper copies will not be distributed (pay or free) by TSASK. Please go to [tsask.ca](https://tsask.ca) to access and print the Interpretations.

**22. All outside plugs must be GFI protected. Is that for other than residential?**

That is correct. There are no longer exemptions for parking lots or commercial receptacles. ALL receptacles outdoors, and accessible to foot traffic must be GFI protected.

**23. I believe the 2021 CEC presentation stated that all new services will now require 150mm of sand above the feeders or for them to be protected by conduit as they make their way to the electrical panel. I wish to clarify if this was understood correctly.**

12-012(4) has been a code requirement as far back as the 1960s.

**24. Is an ambient sensor sufficient for the rule regarding air conditioning and heating interlocking?**

Not unless the sensor operates a couple of interlocked contactors disabling one source or the other at any one time.

**25. When performing a furnace and ac upgrade, are we required to cut the water meter bonding jumper (while keeping the copper line bonded to the panel) and insert a warning card on the meter? Or do we just do this on service upgrades?**

Only service upgrades require grounding upgrades.

**26. Define outline lighting.**

Outline lighting as used for signs and decorative uses such as in casinos.

**27. Will there be a TSASK App for taking out permits?**

There is no plan for an App at this time.

**28. Do I require a pre-inspection if I am adding 2 receptacles to a barn?**

Call your Local Electrical Inspector, discuss the scope with them. The Local Inspector will ultimately make the call as to whether they want to pre-inspect the job or not. It is easier to make the call ahead and have the Inspector decline to see it at rough-in than it is to have to expose installed equipment after the fact.



**29. In an impedance grounded system, is the impedance system bonding jumper insulated?**

The bonding jumper can be bare or insulated.

**30. Is it still possible for a homeowner to pull electrical permits?**

For certain installations, yes.

**31. Regarding 6-300, if we are installing a USEI on a farm service from the F-cabinet to feed a shop, we are requiring rigid conduit or sand in our trench. Can we no longer use screened out dirt? Or does this only apply to new residential?**

Yes, you can use screened dirt. The issue was around cables not being on undisturbed ground and then backfilled with frozen soil and boulders. The cables are being damaged in a couple of years and pulling out of the sockets.

**32. In the Interpretations is it saying a permit is not required for changing devices in a 4 plex or duplex or row housing?**

As per the Regulations, a permit is not required for the changing of devices on a single family detached or non-detached dwelling meant for the use of one family.

Note, if there is a basement suite, this residence is no longer exempted.

**33. On farm F-cabinets, are we not allowing a hookup of multiple services, for example, we have a 200amp F-cabinet service, the customer wants a 200amp service in his house, 100amp to shop, and 60 to outbuilding? Can we not pull all from the F-cabinet and size them accordingly as each their own service?**

There is no change other than the requirements for a bond conductor. Remember sizing if feeding more than one panel as well is based on the main overcurrents.

**34. When do these new code rules come into effect?**

November 1, 2021.

**35. Can LV Technicians rough-in home automation and Power Over Ethernet jobs where there is no “regular” electrical work?**

Electrical work needs to be done by electricians or under the supervision of one.

**36. Have there been changes made to the timelines for submitting permits? Have the fines increased for late permits? I believe we currently have 14 days to submit a permit from the start of work on a job? Has this changed?**

You have 7 days from the day you start the job to pull a permit, but if you do a service it has to be pulled prior to energization. Fines have increased over the years as well as increases for repeat offenders.

**37. Can interlocking of electric heating and cooling equipment to prevent simultaneous operation be done at control voltage or must it be done at line voltage to physically disable the equipment from running?**

Either is acceptable. For instance, a furnace and an air conditioner would be either or, however, if you now install baseboard heat in the basement it would either need to be calculated in or electrical switched with the A/C to be an either/or load.

**38. In reference to the mechanical protection of cable pulled through the wall space of a barn or livestock facility, is being in the center of the stud space considered to be mechanically protected or is a metallic sheathed cable still required?**

Neither BX or ACWU are allowed in those walls, but it still can't be NMSC. So that basically means Teck 90 as far as cable goes.

Other means of mechanical protection for NMSC would be rigid steel conduit, or rigid non-metallic conduit (EMT is NOT an option).

**39. Do we still bond waterline but remove water meter jumper?**

Yes, you need to bond all metal lines on the customer side and remove the jumper to the city side water line. Also, please install the yellow card on the meter, the yellow cards are available from TSASK.

**40. In Category 1 locations, do all receptacles have to be marked "WR"?**

Correct.

**41. Is an isolated neutral bus still required for the meter socket?**

Isolated neutral bus is no longer required, as the connection from neutral to ground is now to be made in the meter socket. If your meter socket comes with an isolated neutral bus, be sure to jumper that bus to ground.



**42. With USEI or USEB, is a bond conductor required to be run with them? Is a rod or plate required at outbuilding?**

A bond is required. If you run a bare bond, no plate is required, otherwise, a plate/rod is required.

**43. Would it be acceptable to use a spa pack to feed a sub panel on something like a boathouse?**

You must ensure that it has both circuit and fault protection. GFI provides only ground fault protection vs GFCI which provides ground fault and circuit protection. Some are only ground fault as the SPA PAK is already protected for O/C so they are not providing additional circuit protection so they often aren't saving as they still need the breaker however in a retrofit this would most likely be a good fix.

**44. Are weather resistant GFIs required on the outside receptacles?**

WR is required for Category 1. Outside is not Category 1. All that is required is the In-Use Covers.

**45. In a butcher shop, would one allow for weather resistant receptacles assuming humidity and moisture from washdown?**

Yes, WR is required here as this would be considered Category 1 due to washdown as you described.

**46. Where do I get the 2021 Saskatchewan Interpretations from?**

Please go to [tsask.ca](https://www.tsask.ca) to obtain your copy of the 2021 Saskatchewan Interpretations.

**47. When running a feed (15amp 120volt 1phase - 12/2 NMW cable) from a house panel to a garden shed near the house, does it need a separate bonding wire?**

As the 12-2 cable is a branch circuit, the bond wire in the cable will suffice.

**48. Can you run a bare copper bond conductor with USEI when wiring from a meter to a house in the city?**

The bond conductor can be bare or insulated. Ensure proper sizing.

**49. When wiring a plug for a sump pump on an acreage, is it required to be GFI protected? I know homeowners don't want it GFI protected due to nuisance tripping or the fear of nuisance tripping.**

Sump pumps require GFI protection. If there is an issue with nuisance tripping, call your local Electrical Inspector for possible solutions.

**50. For kitchen, renovations is it required to upgrade the wiring only if the walls are opened?**

If the walls are opened and/or if cupboards are removed.

**51. Do products similar to Celebright or Gemstone fall under outline lighting? Celebright advertises no electrician is required to install.**

Yes, both are considered outline lighting and require permits.

**52. Does the replacement of an electric water heater require a permit?**

Yes.

**53. What defines “devices” in regard to contractor “device replacement” being permit exempt?**

Devices are listed in the Saskatchewan Interpretations, and the Electrical Inspections Regulations.

**54. How much time do you have to take out a permit after you install energizing sticker?**

The permit must be paid for to be a valid permit and installing a contractor energization sticker without a valid permit is an example of unreported work. Technically the permit must be paid before the sticker is installed.

**55. The removal of the bonding jumper from the water meter only removes the path when the water meter is removed because the metal water piping is required to be bonded as per 10-700 b). So the parallel path is still there when the meter is installed and increases the potential danger to someone removing the jumper. So it almost seems more dangerous to remove the jumper? Or am I missing something?**

When you ground the service neutral in the meter socket that is the only place where the neutral is grounded. It must remain isolated beyond that point.

The jumper around the water meter is connected to the bonding system. If there is an issue with another service, this jumper remaining in place can continue to be a parallel neutral for that other service which is the hazard we are removing with the removal of the water meter jumper.

The water line itself is bonded but not to the neutral so while there may be a parallel bond path if the neutral remains isolated beyond the bond jumper there is no parallel neutral path.

These are two separate issues that we are dealing with.

**56. Since we run the bond conductor, where / when do we need a grounding plate? Only when there is no utility bond provided for example town/city meter sockets? Never for a rural F200 service for example?**

Every service neutral requires grounding at the service. Utility grounding is never acceptable in lieu of grounding the customer neutral.



**57. If aluminum wire is found in a residential setting can pentrox be used on new switches and plugs? Or is the use of copper pigtails, aluminum to copper marrettes, and the use of penetrox the only option?**

You can only make a direct connection from aluminum to a device if the device is rated for use with aluminum. If you do not have devices approved for connection with aluminum, you must pigtail.

**58. Is a permit not required for the replacement of fixtures and devices in townhouses or rowhouses? Is this new? My understanding is this only applied to individual single family homes.**

As per the Electrical Inspections Regulations:

(2) Subsection 16(2) {Contractor Permitting required} of the Act does not apply to the following types of work of electrical installation:

- (a) the replacement of switches, receptacles, ballasts, lighting fixtures or motors in single-family dwelling units and in non-detached dwelling units with separate entrances that are intended for the use of one family.

**59. We bid a campground for spring and just purchased a 600 amp service. Under the new code, I don't believe the service will be big enough. We have already purchased the service. What should we do?**

Your only option is to apply for a deviation and get your permit ASAP.