ADVISORY: CODE VIOLATION - Service Cable Cutting and Splicing | April 2025

ENMAX Power has observed a significant increase in service cable failures on private property within the first five to 10 years of home occupancy. Service cables (also referred to as service coils or secondary cables) are expected to have a lifespan exceeding 30 years; however, premature failures have been occurring at an alarming rate.

Analysis indicates that the primary cause of these failure is the cutting and splicing of service cables during new home construction. While ENMAX Power and The City of Calgary recognize that cable theft remains a challenge—and that repairs (i.e., splicing) are necessary when theft occurs—it has also been noted that some companies may have adopted cable cutting as a proactive method for theft prevention.

Please be advised that cutting and splicing service cables as a theft prevention measure is a direct violation of the Canadian Electrical Code (CEC) Part 1 and must cease immediately.

CSA C22.1:21 Canadian Electrical Code Rule 2-032 and 6-310 and 12-112

2-032 Damage and interference

- No person shall damage any electrical installation or component thereof.

6-310 Use of joints and splices in consumer's service conductors

- Consumer's service conductors shall be without joints between the point of connection and the service box or equivalent consumer's service equipment.
- Includes exceptions for damage

12-112 Conductor Joints and Splices

- 6) Splices in underground runs of cable, if required due to damage to the original installation, shall be permitted to be made b) notwithstanding the requirements of Subrule 4), by means of splicing devices or materials (kits) for direct earth burial.

NON-COMPLIANCE CONSEQUENCES

Should a code violation occur, the accountable party:

- **Will be reported for non-compliance** with CEC Part 1; and/or
- **May be required to replace the entire service cable** from the pad mount transformer to the meter at their cost.

THEFT PREVENTION IS ENCOURAGED

Developers and builders are responsible for securing sites and materials, including service cables. Other jurisdictions have successfully reduced theft by limiting the exposure of service cables. Best practices include:

- Keeping service **cables buried** until installation activities begin.
- Ensuring **prompt backfilling** occurs after installation.

Note: The foundation must remain visible down to the footing level for the foundation inspection.

UTILIZE THE CITY OF CALGARY PROCESS IF SERVICE CABLE THEFT OCCURS

The City of Calgary has an **established process** for service cable repairs that complies with CEC Part 1. If theft occurs, the accountable party must:

- **Obtain an electrical permit** from The City of Calgary before performing any repairs (i.e., splicing) on private property.
- **Repair the service cable using**:
  - **USEB90 4/0 AL cable** for any direct replacements in new home construction.
  - **An approved splice kit** for USEB90 4/0 AL to ensure a proper water seal for all conductors and the outer jacket.
- **Schedule an inspection** through The City of Calgary's **Inspections Online** or the **Remote Video Inspection Services (RVI)**.

- **City of Calgary Inspections will review for**:
    - Proper installation methods (e.g., ensuring the outer heat shrink is correctly installed with glue visible at both ends of the splice).
    - Use of suitable backfill material (e.g. sand).
    - Photo documentation at every stage of the installation, as requested by the Safety Code Officer.

For questions regarding this process, please contact electrical.tac@calgary.ca.

FUTURE PROCESS IMPROVEMENTS

ENMAX Power and The City of Calgary are currently reviewing energization requirements and inspection practices to improve the reliability of electricity service. Industry engagement will be conducted with BILDCR, developers, builders, the Shallow Utilities Consortium, ENMAX Power, and The City of Calgary to explore potential improvements to existing processes.

We appreciate your cooperation in ensuring compliance and maintaining the integrity of Calgary electrical infrastructure.