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INFORMATION REQUEST (IR) - EPCOR Change in Electrical Service
Requested by: Councillor Killick
Date of Request: February 4, 2025
Date Response Due: March 5, 2025
Confidential Response: No

QUESTION
With respect to this recent change to 200 Amp service, what would St. Albert have to do to implement this and what are the pro's and con's? Is this initiated by the City, developers, or Fortis?

200 Amp Electrical Service Update
EPCOR is changing their standard for electrical service connection for new greenfield lot development. Effective May 1, 2025, EPCOR Distribution & Transmission Inc (EDTI) will be changing the standard for the greenfield residential development from 100 amp to 200 amp (25kV circuits). This change will help to increase capacity in new homes to support more electrical devices and appliances (e.g., electric vehicles, air conditioners, heat pumps, electric heating).

RESPONSE

For the 2025 construction season and going forward, Fortis has already made an update to their design requirements to use a higher gauge wire (4/0 cable pronounced as four aught) for residential electrical service connections. This design change allows homes to have 200 Amp service where possible, which would benefit the new homeowners to have increased electrical capacity to support more electrical devices and appliances such as electrical vehicles, hot tubs, etc. This change was announced by Fortis in November 2024 and will come into effect on March 1, 2025.

The new service line will be placed in the third party trenching in the boulevard space as per the City's Engineering standards. To be clear, this new service line will require new and larger electrical boxes to be installed in the boulevard space. In addition, due to concerns about energy loss through transmission, the increased service will require more electrical boxes to be installed than occurred previously, to limit transmission distance. These larger and more frequent installations will be required where it is already a challenge to accommodate existing electrical boxes, as well as street lights, cable boxes, hydrants, bus stops, etc., while maintaining minimum distances for tree placement, and retaining space for street snow storage/accumulation during winter months. This challenge is more pronounced in areas with smaller lots, including duplex/semi-detached product, zero lot line product, and especially where front-access duplex/semi-detached/zero lot line product, has been enabled.

Fortis is responsible for upgrading the line from the servicing transformers to the property line of

individual lots to achieve the 200 Amp service through a process of voltage drop. If the upgrades result in net cost or savings, this would be distributed over to the benefitting new homeowners in the area. For the connection to the house from the property line, the homeowner and builder are responsible for the installation of the required wire sizing as per the building code. The 200 Amp service is viewed as a significant benefit to homeowners as household electrical demand continues to increase.

The challenges to the City, however, are numerous. In consultation with electrical design representatives, the following concerns were identified.

- *Constrained boulevard spaces* - With the extra power requirements and the larger sized cables, the amount of street furniture (power transformers and pedestals) will need to increase by a minimum of 20% and possibly more. This will result in competition for the limited boulevard space. There will be a transformer and a pedestal, or two, for approximately every 12 homes under the new requirements.
- *Additional operating cost for snow removal* - The City may incur additional operating costs for snow removal in the winter to ensure the required additional electrical boxes remain accessible. With the new change, there will be electrical boxes required to be installed not only on one side of the street, as in the current case, but there will be a requirement for boxes to be on both sides of the street. Therefore, the additional operating budget for snow removal may have to be considered for future budget years.
- *Limited space for tree installation* - For areas with small or zero lots with front driveway access, the space challenge will be especially pronounced. These areas require a power box, light pole, hydrant, and telecom box in the boulevard, which already significantly limits the opportunity for boulevard trees. One such location is Nettle Crescent in Nouveau. Nettle Crescent is zoned for zero lot homes having front driveways. As a result of the boulevard constraints from the front driveways, there are a total of only 3 boulevard trees over more than 150m on the East side of the street. With the advancement of Fortis' new design requirements, there would be virtually no trees on such a street, as those existing trees would have to give way for electrical pedestals. This inability to locate boulevard trees would appear to conflict with Goal 4.1.2 of the Council approved Urban Forest Management Plan, which is to "protect, enhance, and expand St. Albert's urban forest." The inability to locate boulevard trees also conflicts with the City's Engineering Standards, which have a local road requirement of one tree per lot.
- *Additional larger street furniture* - As a mitigation measure in the past, Administration has worked diligently with the service providers to ensure that the larger transformers do not get placed in front of the houses, but on the flankages of lots at the end of the streets. With the new change, there may be instances where the transformers have to be placed halfway through the streets, and they are larger than the usual pedestals due to the new spacing requirements between transformers. Accommodation of this could exasperate the already constraint boulevard space.
- *Minimum setbacks posing constraints* - With the permitted minimum front setbacks on homes in some of the smaller lot products, there is no opportunity to install the new electrical boxes on the private property side of the sidewalk as per the Engineering Standard, as they would then encroach onto the foundations or the front entrance of the dwelling units. This then forces the City to accommodate the street furniture on to the boulevard spaces through a standard deviation, which chokes up the boulevard spaces.

As the streetscape will be impacted by the additional infrastructure needs of Fortis, particularly regarding tree count and street parking, the City's Engineering and Planning & Development departments will monitor the effects on narrow lot, front-attached homes, especially those less than 10 meters wide (e.g., zero-lot line, semi-detached, etc.). Based on these findings, Administration will engage BILD (Building Industry & Land Development Association) prior to recommending any necessary regulation changes to Council. Since street trees and the boulevard are a key signature and valued asset of the City of St. Albert, any regulation changes will focus on preserving these features. At this stage, it is not anticipated that rear-access lots will be affected by the Fortis infrastructure changes.

In conclusion, Fortis has already implemented the changes at their end to allow 200Amp services to be realized for new property owners, and all new developments will be required to install the larger gauge cables. There is no cost to the City to implement the changes, but as stated above there will be some consequences that may need to be addressed by the City to follow the new rules.

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