

Recovery of parking place EV electrification costs

EV sales are currently at about 4% of new vehicle sales and higher in BC. Adoption growth rates are between 70% (2018) and 40%(2019 forecast.)

These developments mean that many more strata owners and their strata corporations are now facing demands to accommodate the charging needs of EVs. The [Pembina Institute](#) estimates that one-third of BC vehicles could be electric by 2030. Lack of EV charging capability is already becoming a barrier to resale of units in some strata buildings. This barrier will become more noticeable as more EVs are sold in BC, leading to loss of market value in strata buildings that are not equipped to accommodate them.

Deryk Norton, VISOA Board member

When you sell your condo, you expect to get some premium for any upgrades you made.

Electrifying your parking space would only increase the price of your condo - it will not lower it because it's a modernization. This improvement can take two forms - you just share the cost of wiring out to the space, or you also add the necessary equipment to charge.

The added value you offer is higher than your cost because a) electrification costs can only rise (most of the costs are labour rates) and b) your costs were reduced because you participated in an economy of scale that your buyer would recognize as a big learning curve if he had to do it himself in a building new to him.

The most important issue for owners that don't see immediate benefits in participating in a complete electrification is that you only get one chance to do this at a low price. After that any piecemeal ammendments will likely cost more.

The largest advantage in realizing economies of scale when electrifying parking spaces lies in sharing wire. Laying and fastening wire is labour intensive; if it has to be done multiple times to reach each space individually the costs are prohibitive. Laying a single (thicker) wire is close to the same as laying a single thinner wire.

An additional cost reduction strategy we offer is the sharing of power with the strata suites, so even if calculations indicate there's not enough power available, we can find it easily enough so as to at least meet a minimum standard of charging.

The average cost to traverse a 10' parking space with wire and add a shared connection is probably in the order of 1000.- including power room infrastructure like breakers/panels. This cost can easily be determined at installation time.

Each strata has its own choice of which bylaws are implemented regarding limited common and common property, and owners can be held responsible for limited common property repairs but not so for common property.

This makes it clear that visitor space electrification is a bad idea as it constitutes common property; in addition such an improvement could defeat the occasional visitor use of it since

cars may charge for extended periods. To prevent this requires placing this area under a public parking model, with significant additional costs both fixed and recurring.

On the other hand, the shared wiring traversing owner stalls could be a one-time charge or billed out by the strata to each owner affected, on a cost-recovery basis.

The use of (initially attractive) stopgap measures employing low-cost fixed-rate stations is a bad idea, because they operate independently of most variable-rate shared-power stations. While variablegrid can use their power when they are idle, they take priority when active and will affect variablegrid's power use efficiency.

Another potential issue to avoid is a partial design. Variablegrid will avoid participating in an installation that does not cover all interdependent power room requirements for a full electrification of each stall, because eventual requirements for EV placements are random. The most likely workaround is to change the strata bylaws to allow EV charging only in designated areas, an unlikely solution.

As of the time of this writing there are significant subsidies for MURB parking electrification in BC. See pluginbc.ca Variablegrid is listed under its manufacturer's name (IBX datasystems ltd.)