At the Place du Village Square Annual General Meeting last January, the Board provided a presentation on the installation of a system for charging electric vehicles. The proposed system would be installed in the parking garage. The presentation outlines how they system would work, the basic costs, and how it would be paid for.

Some questions were raised about the operation of the system that the Board was unable to answer. We promised to research these questions, prepare a document containing the answers, and then circulate it along with a copy of the presentation.

Both documents are included here, which, taken together, should provide a good overview of the issues. We recommend that owners review the presentation first, then turn to the Q&A document for the answers to some further questions.

Questions on the Board’s Proposed EV Charging Stations

Q: Is there currently a government subsidy available to pay for installation of electrical charging stations?  A new subsidy plan is expected soon, likely in April or May, which should reimburse the condo for up to half the cost of installing the new system.

Q. The proposed system has two parts: the main power cable and the charging units. Last year, the Board received an estimate from an engineering firm that put the cost of the main power cable at about $40 – 45k and the cost of each charging unit at about $5 - $6k. Is that estimate still accurate? The condo can expect an increase of about 5-10% on the installation of the “backbone,” that is, the main power cable, due to price increases over the last year. The cost of the chargers has also increased, so that installation is now likely to cost about $8K per unit.

Q. The main power cable would draw power from the existing power supply in the building. The system would include 12 “pods,” each of which would receive power from a separate cable branching off from the main cable. Each pod would contain four parking spaces and two **Level 2 charging units**. A charger can only be used by one person at a time, but both chargers in a pod can be used at the same time:

If only one charger in the pod were being used, approximately how long would it take to charge a battery? The answer depends on the size of the battery and how low the charge is when the car is connected. Generally, a smaller EV uses about 16 kWh to drive 80KM. With the condo’s Level 2 charging units, it would take about 4 hours to add that level of charge to a battery.

If both chargers in a pod were being used simultaneously, approximately how long would it take to charge both batteries? When both chargers are in use the amount of power flowing through the cable is shared between them, which then increases the time it takes to charge a battery. With both chargers operating, it would take about 8 hours (rather than four) for each of the two vehicles to receive a charge big enough to drive about 80 km.

If someone in Pod A were charging their battery, would that affect the time it takes for someone in Pod B to charge theirs? No, each pod will have its own circuit with the full amperage available.

Q. Suppose that someone goes on a road trip and when they return their battery is drained. How long would it take to charge? Recharging a drained battery takes much longer than, say, a half-charged battery. In such a case, it therefore might be easiest for that person to go to a commercial charging station (which use **Level 3 or “fast” chargers**) and recharge their batter to 80%. This would take about 15-20 minutes.

Q. Do owners have to pay to use their own chargers? Yes. Each parking spot would have a separate account and a user ID or code, which the owner would enter when charging their car. The charging unit would monitor the amount of time/electricity that the person used, and they would be billed for it monthly. The cost of using the chargers would include both a **fee for the billing service**, as well as for **the electricity used**. The fee for the electricity would be refunded to Place du Village Square.