



Using an E-bike for a Fast and Efficient Winter Commute

Stéphane Ménard is a mental health worker at the Institut national de psychiatrie légale Philippe-Pinel (IPPM) on the eastern tip of the island of Montréal. Living in Longueuil, on Montréal's south shore, he uses the Louis-Hippolyte Lafontaine bridge-tunnel to get to work. Most of the year, the drive takes 40 minutes in the morning and 1.5 hours in the evening.

Several years ago, this cycling enthusiast wondered how he could reduce his commuting times, especially to get home. His choice was an electric bike (e-bike). However, unlike most people, he didn't target summer commutes. In fact, he commutes 60 km round-trip to work by e-bike between autumn and spring. That's 300 km a week!

Benefits & Drawbacks

Since he started commuting by e-bike, Ménard has gone through three separate models. The first two models didn't survive the extensive damage associated with winter-use: cold causing batteries to lose their capability to hold a charge, electrical components deteriorating due to humidity and calcium, repeated mechanical breakdowns due to road conditions, etc.

After a great deal of research, he settled on a Delfast brand e-bike, a model not sold in Quebec, but that he was able to purchase directly from China via an online sales platform for the sum of \$4,000.

The bike has a range of 80 km at normal temperature, enabling him to make a round trip between home and work without needing to recharge. However, in the winter, battery life is considerably reduced due to the cold.

His new Delfast also uses a very heavy wheel motor that remains on the e-bike at all times. Unfortunately, the weight of the motor leads to frequent spoke breakage on the rear wheel.

In addition, the e-bike has to be recharged indoors, especially in the winter, as the batteries do not stand up well to storing and charging below freezing.

His experience has also shown that it's best to avoid charging the battery outdoors, as electrical components can stick. Knowing that a battery costs just over \$1,500, or 1/3 of the price of the bike itself, it's important to take care of it to extract as much battery life as possible.

At home, Ménard has access to an underground parking area where he can charge his battery using a basic 110-volt electrical outlet. The underground parking area also allows him to wash his bike inside and leave it to dry.



This process is essential in winter in order to protect sensitive electrical components and prevent calcium build-up caused by de-icing salt.

At work, Ménard has access to outdoor bike racks that are only partially protected from the elements. In his opinion, a few improvements would be required to meet the needs of electric cyclists in winter: access to an indoor space where they could charge their batteries safely, and an area where employees, who don't have access to underground parking, could rinse their bikes.

While e-bike transportation does have its disadvantages in winter, Ménard attributes his commuting success to investing in proper equipment, such as studded winter tires, learning how to do repairs himself and taking care of his bike after his rides.

By riding his e-bike over 5,000 kms a year, Ménard estimates that he saves around \$3,000 in avoided automobile costs. Not to mention that it improves his health and saves him time on his commute home.

Another significant advantage: the freedom to go wherever you want without getting stuck in traffic! His only complaint is Québec regulations limit speed on bike paths to 32 km/h, and to complete his commute in one hour, he would need to be able to ride at 40 or 45 km/h.

Future Directions

Although his experience so far has been excellent, twice since he started traveling by e-bike he has had to walk home pushing his bike... a distance of 20 km! Since he rides mainly in winter, he has come to accept that the [Canadian Automobile Association](#), does not tow bikes in winter. What's more, no bike/e-bike mechanic is available along his commute route.



Stéphane Ménard and his Delfast e-bike on their daily winter commute.

For e-bikes to become a realistic alternative to the car, Ménard suggests access to specialized mechanics needs to be greatly improved. Since he has owned an e-bike, Ménard has had to carry out the majority of repairs himself, finding solutions on the web. In addition to more mechanics, Ménard also suggests the implementation of mobile repair stations along bike paths, saying they would be a big plus for any micro-mobility users.

On a positive note, Ménard has noticed more bike paths are being developed in the Montréal region and they are being cleared of snow in the winter, allowing for active commuting all year round.

Advice for Potential Users

A few tips for new electric bike owners: invest in good weather- and cold-resistant clothing;

have a basic knowledge of bike mechanics (e.g., how to remove the battery and put it in a dry place before recharging, which grease to use and how to properly apply it, how to remove tires, etc.).

Ménard also suggests, before buying an e-bike, to think about how you are going to use it. This will help you choose the right model at the right price. In particular, if you plan to use your e-bike during winter months, find out the level of waterproofing before purchase. It should be as high as possible to ensure electrical components function normally even in heavy rain or snowy conditions.

From a sale perspective, Ménard recommends stores make e-bikes more accessible to a larger audience by reducing their profit margin on the sale price but increase their maintenance costs. According to Stéphane, a lot of maintenance is essential when riding in winter.

Reflection

What rebates and incentives are available in your province or territory for the purchase of an e-bike? Visit our website [HERE](#) and access our Guide to Incentives and Rebates to find out (COMING SOON).

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