



Nationex Parcel Delivery

Zero-Emission Medium and Heavy Duty
Vehicle Adoption Case Study

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 CLEAN ENERGY CANADA

Tell us a little bit about the company's current fleet.

Nationex Parcel Delivery ("Nationex") was founded in the 1980s with a specialty in next-day delivery services. Nationex has 22 depots in Quebec and Ontario with over 2,000 clients. In September 2023, Nationex acquired a start-up called Courant Plus. Courant Plus was one of the first carriers in Canada to offer fully green delivery services in the Greater Montreal area.

Currently the company has a total of 350 gasoline-powered trucks with 71 electric vehicles, or roughly 17% of their total fleet. These vehicles range from e-cargo bikes, Lion6 trucks, light-duty vehicles, Ford e-transits, pick-up trucks, to GM BrightDrops.

When did the company start their fleet electrification journey and why did they choose to begin electrifying their fleet?

The journey began in 2016 with a start-up called Port Franc. The company was doing imports and exports of fine goods and clothes with Europe. The last mile delivery was happening in Montreal. At the time, the desire was to have these deliveries done with electric trucks but this was not available. Therefore, the company started to use retrofitted trucks that were converted to electric by a startup called Nordresa (which later was acquired by Dana).

Soon, the founders realized there was a good appetite for electric last-mile delivery, but there was no carrier that was offering those services. **Many in the industry kept saying that the technology was not ready or that nobody wanted to pay for it. This was when Courant Plus was launched in 2019—not only to prove the naysayers wrong, but also to accelerate the decarbonization of the electric fleet by choosing a service provider like them.**

Courant Plus launched six months before the COVID pandemic. They were able to last through the pandemic and needed to raise capital to maintain their growth. Courant Plus was able to achieve \$4 million in revenue after four years, but needed to grow faster and gain more capital. This was when discussions started with Nationex. At the time, Nationex's president was intent on having their fleet go green. She was not interested in "greenwashing" and wanted to put actions behind her words. Nationex did not have the access to the electric vehicle network, and Courant Plus needed capital to expand—this was what prompted the acquisition.

Before Nationex's acquisition of Courant Plus, all the delivery vehicles offered by Nationex were gasoline powered. Now after the acquisition, Nationex's fleet is 17% electric. **The next milestone is to electrify 25% of their vehicles.**

Nationex is now looking to expand its fleet of electric vehicles in the Greater Toronto Area (GTA) in early 2025. The goal is to build charging infrastructure along 12 to 13 metropolitan areas between Quebec and Ontario.

What have been the best things about going electric?

While being a pioneer in this space has come with its bumps along the way, it also has come with its benefits. The government of Quebec is looking to put forward regulated sales targets for OEMs for ZEMHDV similar to California. Being a first actor in this space can help fleets build a relationship with certain OEMs, test out technology early, and understand how it fits within their operations by using freight services like Nationex.

What have been the challenges?

1) Access to capital to grow the company and its fleet. When Courant Plus had begun in 2019 up until 2021, there was limited knowledge from banks and insurance companies about electric trucks. These trucks or vans were two to three times the cost of an equivalent gasoline or diesel powered truck or van. Because of this lack of understanding, banks did not want to loan money and insurance companies did not want to insure the vehicles. It was difficult to generate capital—even with venture capital firms—because at the time electric trucks and vans were not considered "trendy". Even investors that spoke about "impact financing" were still expecting large yields of 15%-20%.

What helped Courant Plus gain the capital it needed was major companies "taking a chance" on the upfront risk of investing in the smaller start-up. What saved Courant Plus was companies realizing that things needed to change, and these companies put their trust in Courant Plus to be an actor of that change.

2) Administrative burden when working with incentive programs and policy makers. Navigating through different program requirements (such as the Eco-camionnage vehicle incentive program out of Quebec or the federal iMHZEV program) is very time consuming. These programs are primarily tailored for smaller fleets that are not looking to scale in a short period of time. This was not applicable to Courant Plus/Nationex's model that wanted to expand its electric vehicle fleet rapidly. Therefore, this required significant engagement with the provincial government to enable incentives at a scale that met their requirements. In addition, other provinces like Ontario where Courant Plus/Nationex wants to launch do not offer any provincial incentives.

3) Working with first generation vehicle technology.

While electric vehicle and battery technology has been around for a long time now, its application is more recent in medium- and heavy-duty vehicles. Many OEMs are only recently releasing electric models of their vans and trucks. With these “first generation” vehicles, this can come with its own challenges (for example, consistent vehicle servicing, cold weather testing in northern Quebec, and vehicle reliability). This can have an impact on the customer relationship, but Nationex has acknowledged these are “growing pains” that come with being a pioneer looking to scale electric vehicles in a short period of time.

How did you understand the right infrastructure for your project?

Finding the right infrastructure for Nationex/Courant Plus’ project required a lot of trial and error. The company saw that they were the first players in the industry, saw a growth opportunity, and reached out to new charging stations and vehicle providers.

At the moment, the main market for deliveries is within Montreal with a distribution centre in St. Hubert. Nationex has 12 charging stations at a depot in Montreal, but have also selected a building in the area to deploy heavy-duty truck charging stations to be deployed in the summer of 2024.

The second biggest depot is in Quebec City which has 10 charging stations, but Nationex is looking to install more as they have purchased 15 more BrightDrop vans. Nationex also has 5 chargers in Ottawa/Gatineau, 4-5 in Drummondville, and 2 more in Chicoutimi. The benefit of being located largely in Quebec is that the public charging network is more reliable, particularly with Hydro Quebec’s Circuit Electrique chargers that can be utilized in worst case scenarios.

A few months ago Nationex purchased two class 8 Volvo VNR to operate within a corridor between Quebec City and Montreal. The company also recently ordered two eCascadias. The idea is to prove that freight delivery can happen from the first mile all the way to the last mile with the current technology that is available. While many of Nationex’s clients operate in various stores in Montreal, they also have various clients in Quebec City. In the fall of 2024 Nationex will have completed the upgrade of their St. Hubert headquarters for the additional vehicle purchases the company has made. The company also bought an extra warehouse where it will have charging stations for heavy-duty trucks. This offers a large opportunity to reduce GHG emissions on routes connecting the two cities together. Nationex, in collaboration with Propulsion Quebec, aims to build the corridor in October-November of 2024.

Infrastructure upgrades are also taking a long time—currently working with Hydro Quebec, Nationex is being quoted for at least nine months. There are also no “special electricity” prices that are offered to fleets looking to electrify, whereas other industries like aluminum have these benefits in the province.

Did you hire any new staff or did current staff change their day-to-day operations for this transition?

Courant Plus was built and designed to operate electric trucks only. That was why Nationex relied on the expertise that was built within the start-up during the acquisition. This was built into the business model.

What programs and incentives did you use?

The Eco-camionnage program offered by the province of Quebec stacked with the federal iMHZEV program has been important in building the business case. The downside is that there has been a large administrative burden placed on the companies that are applying. In addition, there is a vehicle cap of 10 vehicles per year that can receive funding through the program. This is not conducive to companies that are dedicated to electric vehicles or that want to scale quickly.

It also does not help that different provinces offer different programs. For example, Ontario does not offer any vehicle incentives. The next phase of work that Nationex would like to do would involve expansion into the GTA. This creates a vast difference in the amount of support available in each jurisdiction.

What insights would you pass on to other fleets looking to electrify?

- 1) Engage with utilities early and often.** Working with Hydro Quebec, current upgrades being quoted could take at least nine months. A fleet should look to integrate longer timelines with infrastructure installation into the larger project timeline.
- 2) Electrification of freight is possible today, and there are customers out there willing to try it out in their operations.** Nationex is on a mission to prove that. The company has already electrified 15% of its fleet and is on its way to 25% as the next milestone. While these vehicles are largely smaller medium- and heavy-duty vehicles (e.g. cargo vans), the company is also in the midst of trialing a class 8 Volvo VNR tractor between Ontario and Quebec. There are customers who are willing to try this out. While the transition has not been perfect, with bumps along the way, the company has continued to prove it is possible.