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## Lion, an Electric Shock to the Transport Industry

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Unknown ten years ago, The Lion Electric Co. now has a well-established reputation of a Company that disrupts. After taking the school bus industry by surprise with the development of its first electric vehicle in 2015, the Saint-Jérôme-based business continues its development; this time by tackling the truck industry.



“You have no idea how much the industry hates us!” says Marc Bédard, President of Lion and co-founder of the Company with Camil Chartrand. “The bus and truck manufacturers hate us. But (transportation) operators love us and that’s all that matters.”

From their current facility on Chemin de la Rivière du Nord, seen from the edge of the highway, the company has managed to climb up among the major players in the electric vehicle industry in just a few years. The entrepreneurial spirit of Lion, initially discouraged by many, is attracting the attention of customers all over North America. And that of investors like Alexandre Taillefer and Power Corporation.

### Serial Disruptor

Now 54 years old, Marc Bédard became an entrepreneur later in life. After serving for years on the board of directors for Entreprises Michel Corbeil, former bus manufacturer in the Basses-Laurentides, Mr. Bédard had learned one thing: the industry had not evolved in the last 40 years. Until then, the Canadian and US school transportation industry – evaluated between \$3 to \$4 billion per year – was essentially controlled by three American bus manufacturing giants: Blue Bird Corporation, Thomas Built Buses and IC Bus. Fleet managers liked the safety of the finalized products but blamed them for their high operating costs (in fuel and mechanical maintenance) and their unfortunate tendency to rust quickly.

These observations fostered the idea to completely revisit the school bus industry and design. The former PwC partner decided to leave everything behind in 2008 and invest all his savings to develop a new generation of school buses. “I’ve always refused to say how much I’ve invested,” he said in his interview with Les Affaires. “But I will tell you that all of our money, all that we could, every cent we

had, we put it into the development of this first product. It was completely irrational, and they didn't hesitate to tell me so."

In 2011, Lion gave birth to a completely redesigned vehicle, thanks to the use of fiberglass, aluminium and various plastic alloys, it was lighter (about 1,000 lbs lighter) and rust resistant. It didn't take more than that to attract the interest of buyers and quickly disrupt the industry. The oligopolistic regime that had been established for several decades had been broken.

However, Marc Bédard is not satisfied. Taking advantage of the support of four financial angels, he seeks to free his vehicles from their dependence on diesel fuel. Four years later, after hundreds of bus sales, Lion comes back with a revolutionizing innovation. At the end of 2015, the company launched its first all-electric school bus on the market and recorded its first sales at the beginning of the following year. Its reputation as a troublemaker is growing.

At the same time, the doors of a brand new market are opening: clean energy transportation demand is rising in many American states, starting with California.

Named eLion, the new school bus, also made of composite materials, is equipped with its own battery packs and a motor developed entirely by TM4, a subsidiary of Hydro-Québec. "Unlike what we typically see, here and in Europe, the eLion is a true electric bus," explains, admiringly, Eric Azeroual, TM4 Director of Sales. "It is not one of those traditional vehicles where electric motor parts were added. Not at all! It is a true new electric bus that the entire industry envies."

### **Three Rounds of Financing**

From then on, things evolved rapidly. Known for his interest in innovation, businessman Alexandre Taillefer didn't hesitate to invest during the second round of financing. Thanks to an investment of about \$7M from his investment company XPND Capital, the 'ex-dragon' becomes the owner of just under a third of the company.

Shortly after, the Quebec Government launched its first *Transportation Electrification Action Plan* with a budget of \$420M, of which \$30M is to assist with the purchase of electric school buses.

"It is extremely rare to see a man who previously earned a very good living decide to leave everything to go into business," commented Alexandre Taillefer. "Marc Bédard is one of those rare exceptions who, while knowing how to anticipate the market, also understands that you can't sit back and wait."

In the summer of 2017, Autobus Lion changed its name (and visual identity) to The Lion Electric Co. Less than five months later – at the beginning of November – Power Energy, a wholly owned subsidiary of Power Corporation Canada, announced a major investment in the business. The amount of this investment remains secret to this day. It is "major, easily double" the total investment that the company had received until then, Marc Bédard said half heartedly. "One thing is certain," he adds "it will change a lot of things in the future. And for the better!"

### **From the Minibus to the Heavy Truck**

The company will launch the eLionM this summer, an electric minibus designed to meet school transportation, paratransit and transit requirements. The vehicle will be able to travel 120 km to 240 km. "It is very popular and can be used in so many different ways that we're already calling it our 'Swiss Army knife'," summarized Mr. Bédard. It has been designed to integrate future intelligent systems (for example, autonomous driving). Everything we build, we build with the intention to anticipate the next 15 years."

The development of this new vehicle is a major achievement for Lion, with part of their success story in their ability to control their entire production line. As a major client, the company buys from about 400 suppliers, half of which are in Quebec. For now, Mr. Bédard believes that this logistical headache gives him better cost and quality control over his products.

Lion wants to start manufacturing a new complete line of all-electric trucks by the end of the current year. We're talking specifically about specialty medium to heavy duty urban trucks (classes 5 to 8). The vehicles can range from ambulances or trucks used by Hydro-Quebec, or concrete mixers and traditional moving or delivery trucks used by Brault and Martineau, for example.

### **Competing with Tesla**

The urban truck sector is drawing a lot of attention from the industry. Cities like New York are about to mandate that delivery truck operators must have 25% of their fleet comprised of electric vehicles. Without a certificate of attestation, their trucks won't be allowed in the city.

Elsewhere, as seen in California, cities want to design electric neighborhoods, where areas will completely ban diesel trucks from circulation in order to limit noise and pollution.

Recognizing these changes, many companies like BAE Systems, Volkswagen and Tesla recently announced their intention to also play a role in the electric bus and truck market.

Is this something Lion should be worried about? "We don't talk much. We are very discrete. However, I can assure you that no matter what others may say, our electric truck will launch before Tesla's." This would mean that the Lion heavy truck (class 8) would launch at the end of 2018 or early 2019.

### **A US Factory**

To date, the Saint-Jérôme company claims to have sold 150 electric buses (eLion) and 700 diesel motorized buses (Lion). Its assembly plant employs just over 100 employees; doubling in the last two years. Its experienced staff often come from other local manufacturing companies, including Komatsu, Paccar or Novabus. But not always. "Twenty years of experience sometimes boils down to twenty years of inefficiency," says the big boss.

The company expects \$40M in sales in 2018. If the demand continues to grow, he estimates that sales will climb another 50% within a year to \$60M. And in five years? "It won't be comparable," replies the President, hesitant, before saying, "We think it could be ten times more..."

Lion is already thinking of expanding. Currently at 85,000 ft<sup>2</sup>, the Saint-Jérôme assembly plant could triple to “200,000 ft<sup>2</sup> to 300,000 ft<sup>2</sup>”. The number of workers should follow the same increase.

Around the same time, Lion also plans to open a facility in the US, to increase its production, get closer to its customers and be able to comply with the US rules and regulations.

More than 60% of the current sales come from the US, a proportion which could increase rapidly given the willingness of major US cities to electrify public transit fleets and limit diesel truck deliveries.

Similar in size to the Quebec facility, the United States assembly plant could hire up to 200 workers within three years. The exact location of the plant has not been released yet but many states, including New York and California, have already approached them.

## **The School Bus Oligopoly to Beat**

**Blue Bird Corporation** (listed company, main shareholder Ceberus Capital Management), founded in 1932, located in Georgia.

**Thomas Built Buses** (a subsidy of Daimler Trucks North America [Freightliner], founded in 1972, located in North Carolina.

**IC Bus** (a subsidy of Navistar International Corporation), founded in 2002, located in Illinois.