

Exro continues to move higher as they provide battery control systems for second-life battery storage

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Exro's Coil Driver has been shown in a 2020 case study to improve power and efficiency by more than 30%

The story of [Exro Technologies Inc.](#) (TSXV: EXRO | OTCQB: EXROF) ('Exro') just keeps getting better and better. Exro's stock price is up well over 10 fold ([C\\$0.50](#) to C\$7.17) the past year and Exro has been [upgraded from the CSE to the TSX-V exchange](#). Exro's business has continued to expand to include both electric motor management and now battery management. Added to this Exro continues to commercialize its technology with agreements and sales across different EV sectors.

Exro's first technology (Coil Driver) acts like gears on a car to improve the overall performance of an electric motor across different speed ranges, typically in an electric vehicle (EV) or generator. The Exro Coil Driver uses Artificial Intelligence (AI) to optimize the output of an electric motor at different speeds. This makes the technology highly sought after in the world of EVs. Or, as Exro [states](#):

"Exro's Coil Driver dynamically enables multiple power settings in a single motor using next generation power electronics....Equipped with advanced power electronics, the Coil

Driver can drive any AC motor with increased performance in a wide range of applications up to your peak power.”

Commercialization progress for Exro and a new vertical (second life battery control system for energy storage)

On February 9, 2021, Exro [announced](#) a strengthened collaboration with SEA Electric that will expand on the coil driver commercialization in SEA Electric’s Class 6 to Class 8 trucks. The partnership also aims to accelerate the development of **Exro’s Battery Control System (‘BCS’)** and to facilitate second-life battery storage, by H2 2021.

Exro [states](#): “The agreement expands on the initial scope to commercialize the Exro Coil Driver in SEA’s electric trucks to now include a Class 8 electric truck for the Canadian market and volume production targets of 400 trucks minimum by the second-year post validation.”

The Battery Control System news follows on from earlier news that [Exro validates intelligent battery technology for second-life applications](#). This means that Exro is now expanding into a new vertical, battery control systems, and ‘second life’ for batteries used in energy storage. ‘Second life’ refers to a secondhand battery that still offers a useful ‘second life’ in another application, such as energy storage (the first application may have been in an EV).

Energy storage is potentially one of the fastest-growing areas this decade. Second-life energy storage is forecast to grow at [a CAGR of 23.1%](#) from 2020 to 2030. In the U.S., President Biden wants [100% carbon-free electricity by 2035](#). This means smart nuclear, solar and wind energy will boom. Solar and wind energy will need energy storage to make them fully effective.

Exro [state](#) about their battery control system:

“Exro’s Battery Control System (BCS) can expand the capabilities of batteries by enabling a greater depth of control on the cells. The cells remaining in a battery at the end of the first life can be optimized to rejuvenate the same battery into a new second life. The BCS can establish a greater depth of control on battery cells because the same principles that govern coil groupings in electric motors can also apply to managing cells in a battery.....The BCS can lead the rapidly growing energy storage markets by extending battery life, increasing reliability, and reducing total costs.”

Exro Technologies now has two key technologies – Coil Driver for electric motors and a battery control system for second life energy storage



[Source](#)

Other recent news highlights Exro’s progress and success towards commercialization

- Feb. 4, 2021 – [LAND Electric Motorcycles to order up to 2,000 coil drivers from Exro in the first year.](#) LAND is a fast-growing player in the emerging lightweight electric motorcycles market. LAND’s CEO Scott Colosimo stated: “We believe integrating Exro’s Coil Driver technology with our product will allow LAND to achieve best-in-class performance and efficiency.”
- Feb. 3, 2021 – [Exro’s 100 Volt Coil Driver ready to ship to Potencia.](#) Potencia will now do its own testing and provide performance validation results by early third quarter 2021. Recall that Exro has [contracts](#) with Potencia Industrial, which is one of Mexico’s leading motor manufacturers. One of Potencia’s projects involves converting internal combustion engines in Mexico City’s

taxis to electric motors, as part of a city-wide initiative to green the city's 250,000 taxi fleet.

Closing remarks

Exro Technologies continues its success. In recent times this has meant new contracts for their coil drivers used in electric motors. Exro also now has a battery control system that has been validated to improve second battery life for use in the energy storage market.

As we move into the EV and energy storage decade, Exro Technologies is emerging as a potential leader with their ground-breaking technology to improve the performance of electric motors, generators, and now batteries. Exro certainly is a company in the right place at the right time.

The current market cap of Exro Technologies is now C\$689 million. Exro has [opened their Calgary Innovation Center](#) and is now well cashed up after a recent [~C\\$42 million](#) equity raise. Despite the incredible run so far in the Exro stock price, the future still looks very bright for Exro Technologies.

**Boosting electric vehicles
with artificial intelligence
and leadership, a powerful**

combination for Exro Technologies

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Two of the biggest trends this decade are electric vehicles (EVs) and artificial intelligence (AI). Together they make a powerful combination. Just take a look at the chart below for [Exro Technologies Inc.](#) (CSE: XR0 | OTCQB: EXROF) (“Exro”). Exro’s stock price is up over [400%](#) in the past year, which coincides with the time that CEO Sue Ozdemir has been with the company.

Exro Technologies (CSE: XR0) stock price is up 413% over the past 1 year



[Source](#)

Exro Technologies is a software design technology and smart energy company that creates a software module called a “Coil Driver” that uses AI to make electric motors function better. In an electric car, the Coil Driver acts like gears do on a conventional car, boosting an EV motor’s range and performance by using two separate torque profiles for a motor. The first is calibrated for low speed and high torque, while the second provides expanded operation at high speed.

Reflecting on the past year and why Exro has done so well

Over the past year Exro has made very significant steps in commercializing their technology, securing several significant partnerships along the way. Here is a brief summary of Exro’s partners/agreements:

- **SEA Electric Pty Ltd.** – In July 2020, Exro [announced](#) a partnership to enhance electric powertrain technology for heavy-duty trucks and delivery vehicles.
- **Zero Motorcycles (“Zero”)** – In June 2020, Exro [announced](#) a collaboration agreement with Zero to evaluate Exro’s patented Coil Drive technology using Zero’s SR/S powertrain platform. Zero is a big name in electric motorbikes.
- **Clean Seed Capital Group Ltd.** – On April 28, 2020, Exro [announced](#) it has signed a collaboration and supply agreement with Clean Seed Capital Group Ltd. (TSX-V: CSX) to integrate Exro’s technology into Clean Seed’s high-tech agricultural seeder and planter platforms, advancing the electrification of the world’s heavy-farm equipment.
- **Motorino Electric** – In December 2019, Exro [partnered](#) with Motorino Electric. Exro’s engineered technology provided a torque and acceleration increase of 25% for the Motorino e-bike.
- **Templar Marine** – Exro has [a pilot project](#) running with Templar Marine’s water taxis. The marine sector is a multi-billion dollar industry that can stand to benefit enormously from Exro’s technology as they increasingly switch across to electric motors for a cleaner environment.
- **Aurora Powertrains** – Exro has [partnered](#) with Aurora to improve the Aurora’s all-electric snowmobile.
- **Potencia Industrial** – Exro has [contracts](#) with Potencia Industrial, which is one of Mexico’s leading motor manufacturers. Potencia designs and manufactures special application, high efficiency, electrical motors and generators. One of their projects involves converting internal combustion engines in Mexico City’s taxis to electric motors, as part of a city-wide initiative to green the city’s 250,000 taxi fleet. Exro works to

integrate its hardware and software technology into Potencia's motor drives. The Exro customized driver [will be used as the inverter](#) for Potencia's Pronto Power Flexible Powertrain.

"It's hard to believe that it has been a year since I joined Exro," [said](#) Exro CEO Sue Ozdemir. "The past 12 months has been so rewarding as we innovate and transform our business. We are positioning ourselves to become leaders as we use the power of our technology to transform the way the world looks at energy consumption. I believe we now have the ideal platform to be successful." As for future plans, Ozdemir said: "Our team is continuing to focus our attention on co-development with our partnerships. We have a strong pipeline and are optimistic in our ability to meet our commitment to eight deals by the end of 2020. Further, we are gaining global presence as our partners deliver applications in North America, Australia, and Europe."

As most experienced investors know it is one thing to have a good idea or product, but it is another thing to successfully market, commercialize, and make profits. Exro is already doing the first two, and revenue is forecast to soon follow in 2021, growing in 2022.

Exro Technologies financials and forecast financials



[Source](#)

Catalysts

In a September corporate update Exro set out the following [near term events](#) for the company:

"November 2020 – Delivery to Potencia (electric car application). This is an especially pivotal project for Exro as

it will become the platform design, reducing design time for future partnerships. It also serves as our first in-car application, demonstrating our ability to transform the automotive power electronics industry.

December 2020 – the IBMS (Intelligent Battery Management System) proof of concept. With the research phase now behind us, this technology development will allow us to provide test bench data to support our simulations and confirm that we are able to provide a solution for first life batteries to be used in second life applications, such as stationary storage for example.

Q4 2020 – We expect the 8th deal will be yet another representation of the versatility and scope of our innovation. We put a lot of effort into how each partnership contributes towards our future growth plan. Finding partners that deliver a new segment, new geography or new application is part of securing our footprint in many market segments. This will position us for a robust and sustainable future.

Early 2021 (Q1) – Delivery to Zero Motorcycle (“Zero”) (electric motorcycle application).”

Closing remarks

There is no doubt that Exro Technologies has had a busy year. Their technology is clearly being very well received by the market and the steps to commercialize the technology are now being put in place. When we consider the massive size of the electric motor market, in particular the new and surging demand for EVs, it is not surprising when Exro CEO Sue Ozdemir says “we have a lot of room for growth”. I think that is a huge understatement.

For their investors it has been a great year. Given that Exro trades on a market cap of just C\$114m, if they succeed in the next step of rapidly raising revenues, this could be just the beginning. I will be very interested to see how Exro Technologies goes over the year ahead.