

# Exro Technologies

06:40 11 Dec 2017

## Exro Technologies applies new twist to enhance electricity generation

Exro Technologies Inc (CSE:XRO) has developed a technology to enhance an invention that has served mankind remarkably for more than 150 years.

Exro's dynamic power management technology enables electric generators and motors to work at peak efficiency, even at variable speeds.

Why is that important?

As Exro's chairman and chief executive officer Mark Godsy explains, electric generators only work efficiently at a single speed, and "if they go too fast, it's a challenge; if they go too slow, it's also a challenge."

For scores of years this has not been a problem because generators have used an energy source - coal, diesel, or gas - that allows the rotating part of the generator to remain at, and operate at, a consistent and optimum speed and torque, but the increasing push towards renewable energy is changing the game.

Exro's technology adds some smarts to a generator and an electric motor

Mother Nature may be bountiful, but she is not constant, and if you don't believe it, think of those seemingly paradoxical reports of wind turbine generators shutting down because it is too windy.

"What we do at Exro is, very simply, bring Intelligence to a generator and an electric motor," Godsy says.

So, what's the big twist on the ancient technology?

The traditional generator works off a single configuration of coiled copper wires, whereas Exro's does not.

"We isolate all of the coils. We then create circuits amongst them, driven by a computer that, depending on the speed and torque, will reconfigure the coils in the generator for exactly the right speed and torque, creating an efficient and "Intelligent" generator," Godsy explains.

The technology was invented by Jonathan Ritchey, Exro's founder and its chief scientist and designer.

Optimizing power systems is becoming more important in the current economy.

"The problem does not apply only for renewables," Ritchey declares.

Take electric motors. These are essentially the flip-side of electric generators,

**Price:** C\$0.205

**Market Cap:** C\$13205200M

### 1 Year Share Price Graph



### Share Information

**Code:** XRO

**Listing:** CSE

**52 week High Low**  
C\$0.48 C\$0.18

**Sector:** Tech

**Website:** [www.exro.com](http://www.exro.com)

### Company Synopsis:

*Exro Technologies has developed and patented a technology for self-optimizing electric motors and generators to improve efficiency in applications with high variability. Exro's IP can be integrated into existing applications, or designed with OEMs to create new custom designs that maximize economic performance.*

action@proactiveinvestors.com

and the same conundrum applies: getting the motor to work at maximum efficiency at variable rotational speeds.

"These are the technical issues that Exro is addressing," Ritchey asserts.

Ritchey sees a lot of applications for Exro's technology in the high-profile sector of electric and electric-hybrid vehicles.

"Put in our technology and it will allow you to have a situation where we not only gather more electricity when you are braking but that electricity does more for you when you are converting it back into mechanical energy," Ritchey says.

The potential breadth of applications for the technology is enormous, but initially, Exro is targeting proof of concept in wind energy, unmanned aerial vehicles (drones) and electric/hybrid vehicles starting with electric bicycles.

The company has built three prototypes to prove its technology's viability and is now focusing on early market opportunities.

In a capital-intensive, low-margin business, those sorts of efficiency improvements are sure to make wind farm operators sit up and take notice. Exro's technology can also be used to retrofit existing wind turbines.

As for drones, these will become more efficient, paving the way for smaller drones or bigger payloads, and potentially longer flying times.

Exro has already signed a development agreement with a leading supplier of propulsion systems for drones and is working towards validating the technology for this application.

As for electric/hybrid vehicles, reduced electricity consumption and greater power regeneration when braking could significantly reduce the range anxiety for drivers.

The Exro business model envisages income from licensing fees and royalties

The name of the game for Exro is to prioritize near-term market opportunities with low execution risk.

A key aspect of this strategy calls for securing partnerships with leading companies who have their own design and manufacturing facilities and distribution channels.

Exro's revenues will largely come from licensing fees and ongoing royalties, in return for allowing the use of its technology to be integrated into generators or electric motors.

"The reason for a licensing/royalty model is to achieve scale and create concurrent value for our shareholders. Our proprietary technology has the potential of creating intelligence in billions of electric rotating machines — be it in generators or electric motors. If we were to do an elevator a day just for the approximate 17 Western European countries, it would take us over 1,000 years," Godsy explains.

"We need to work synergistically with parties in this space by working with them, not competing against them.

"We want to work with all companies that can benefit from our technology - not unlike Intel wants to provide processors to all computers versus creating its own computer brand and competing with them - working with companies is a much better long-term strategy since our technology is easily integrated into generators and motors," he adds.

If that sounds like the semi-fabled "win-win" scenario, there's actually a third "win" to be taken into consideration and that's the environmental aspect.

It was one of the things that drew serial entrepreneur Godsy to Exro in the first place.

"I was attracted to Exro as I am concerned as much now about the health of our planet as I am about the health of people. Exro has an opportunity to change the way we create and use energy, which can help our planet and reduce the other related issues connected to energy. The win-win here also includes the opportunity to build value for our shareholders," Godsy says.

Company founder Ritchey believes the drive to a clean power world will eventually come down to economics.

In other words, the bottom line will be the bottom line or, if you prefer, it will happen because "torque is cheap".

"So, if we're able to make that economically viable now, it's not a carrot and the whip; it's not the subsidies, the tax credits; it's because it is also the best financial decision."

Proactive Investors facilitate the largest global investor network across 4 continents in 4 languages. With a team of analysts journalists & professional investors Proactive produce independent coverage on 1000's of companies across every sector for private investors, private client brokers, fund managers and international investor communities.

Contact us +44 (0)207 989 0813 [action@proactiveinvestors.com](mailto:action@proactiveinvestors.com)

### No investment advice

Proactive Investors is a publisher and is not registered with or authorised by the Financial Conduct Authority (FCA). You understand and agree that no content published constitutes a recommendation that any particular security, portfolio of securities, transaction, or investment strategy is suitable or advisable for any specific person. You further understand that none of the information providers or their affiliates will advise you personally concerning the nature, potential, advisability, value or suitability of any particular security, portfolio of securities, transaction, investment strategy, or other matter.

You understand that the Site may contain opinions from time to time with regard to securities mentioned in other products, including company related products, and that those opinions may be different from those obtained by using another product related to the Company. You understand and agree that contributors may write about securities in which they or their firms have a position, and that they may trade such securities for their own account. In cases where the position is held at the time of publication and such position is known to the Company, appropriate disclosure is made. However, you understand and agree that at the time of any transaction that you make, one or more contributors may have a position in the securities written about. You understand that price and other data is supplied by sources believed to be reliable, that the calculations herein are made using such data, and that neither such data nor such calculations are guaranteed by these sources, the Company, the information providers or any other person or entity, and may not be complete or accurate.

From time to time, reference may be made in our marketing materials to prior articles and opinions we have published. These references may be selective, may reference only a portion of an article or recommendation, and are likely not to be current. As markets change continuously, previously published information and data may not be current and should not be relied upon.