The million mile battery is ahead for electric vehicles – and investors

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Nano One positioned for great things as the EV boom approaches

Superior battery technology continues to move towards significant breakthroughs such as the 'million mile battery' and 'low cost/fast charging' lithium ion batteries. These new advances will act as a huge boost for electric vehicle (EV) sales and allow the next generation of EVs to become super competitive with conventional cars. The **million mile battery** suddenly makes EVs the preferred choice for fleet operators (taxis, hire cars, deliveries, trucking etc) and the cheaper/fast charging batteries mean that by 2022 we should start to see EVs reach price parity with conventional cars. This will lead to a tsunami of EV sales.

All of this is only possible because of scientific breakthroughs by leading companies such as Nano One Materials Corp. (TSXV: NNO). Car and battery manufacturers are jumping onboard so that they can remain competitive in a rapidly changing auto world. Volkswagen's partnership with Nano One is just one of many examples.

Understanding the massive changes happening in the auto industry helps explain why Nano One's stock is up 145% over the past year as investors start to see their potential of the predicted US$23 billion cathode market opportunity. Specifically, Nano One is targeting the licensing opportunity to improve cathodes

estimated at $1 billion in annual revenues by 2025.

Nano One's mission is to establish its patented technology as a leading platform for the global production of **a new generation of battery materials**. Nano One has developed patented technology for the low-cost production of high-performance lithium ion battery cathode materials.

Nano One is targeting a potential $1b licensing opportunity in the $23b cathode market by 2025

Source

Investors might think that it is too late to buy into Nano One looking at recent stock price gains, but actually on the current market cap of C$239m if Nano One can deliver the potential revenues below as per their targets the stock will have appeared cheap. This is because they are targeting about $70m a year in revenues by 2025 and profit margins are expected to be extremely high.

Nano One potential revenues by 2025

Source

Nano One's patented cathode used for the 'million mile battery'

Nano One announced in June this year the development of a coated, single crystal cathode material for lithium ion batteries that is providing **up to 4 times improvement in longevity**. The technology is applicable to all of Nano One's cathode materials but is especially relevant to lithium nickel manganese cobalt oxide (NMC811). According to Nano One, "Increased durability is critical in enabling extended range, faster charging and even million mile batteries for electric

vehicles."

This breakthrough makes the 'million mile battery' within reach. Such a battery would mean EVs can last at least 4x longer than a conventional car. The implications are enormous. Fleet operators will be lining up to buy EVs with million mile batteries.

Nano One's other key projects (LFP cathodes, and solid state battery cathodes)

Nano One has also made great progress in reducing the cost and improving the performance of Lithium Iron Phosphate (LFP) cathodes. Nano One has developed patented 'one-pot cathode materials and production processes' that reduces both the time and cost of LFP production. Working with partners such as Pulead who specialize in LFP cathode production opens up the door for licensing opportunities.

Nano One is also working on a breakthrough for the 'holy grail' of batteries – a solid state battery. Nano One's patented cathode tests positively in solid state batteries with auto companies. Nano One says that their "cobalt free cathode reduces supply chain risk, increases power and enables fast charging," and their "coated nanocrystal cathodes (single crystal) boost durability, capacity and charge rates."

Nano One is partnered for success

Nano One is very well partnered into the EV/battery supply chain via partnerships with industry giants Volkswagen, Pulead, Saint-Gobain and other undisclosed global automotive interests. Added to this they have had the support of the Canadian government.

Closing remarks

With so many breakthroughs in one year it is little wonder that Nano One's stock price is up 145%. Great management, great

technology, and great partners are always a winning formula.

Nano One currently has a market cap of C$234m and looks poised for great things as the real EV boom is just about to begin.

Further learning

- Dan Blondal on Nano One's breakthrough in lithium-ion cathode materials and the 'million mile battery' (video)