

Global leader in lithium-ion batteries invests in what many believe will be the next major lithium producer

There is a very high probability you are reading this on your smartphone, tablet or laptop. If that is the case, you know the value of lithium, because it's in the battery powering your device.

Until some better storage system comes along, lithium-ion batteries are the industry standard. There is much talk about improving lithium battery performance using platinum group metals, carbon nanotubes etc., but that is not now.

Lithium is not like oil – it's pretty much everywhere on Earth, according to Elon Musk. But like oil, the devil is in the details – extraction costs are key.

Enter Neo Lithium Corp. (TSXV: NLC | OTCQX: NTTHF), a C\$110 million market capitalization company that proudly proclaims to be “the next major lithium producer” with its Tres Quebradas (3Q), located in the Lithium Triangle in South America. The project is located at the southern end of the triangle in northern Argentina.



Source: Neo Lithium

Lithium is mainly sourced via hard rock mining (spodumene) or brine production. The majority of the mining projects are located in Australia while brine production is centered around the Lithium Triangle, which has an estimated 75% of global lithium reserves according to the US Geological Survey, although other reports state that the area only contains just over 50% of global reserves. In any event, the area does

account for 40% of global lithium production and 90% of global brine production.

Brine production of lithium in South America is in the high altitude (~4,000 meters elevation) salt flats (salars) in the Lithium Triangle and is accomplished through a pond evaporation process. The Lithium Triangle is ideal for this, as it is characterized by very arid conditions, solar radiation and dry winds, resulting in high evaporation rates. Lithium brine extraction in the area has been underway for more than 25 years, so this is not “new” technology.

Like any commodity, the view to significantly increased demand in the past 5 years resulted in a rush to develop new lithium mining projects. This led to an oversupply situation and a significant downturn in lithium prices in 2019. But, with the rush to electric vehicles, absent any new battery technology, experts anticipate a ten-fold increase in demand for lithium over the next decade and only a three-fold increase in supply in the next five years – demand could outweigh supply and result in significantly higher lithium prices.

OK – now you understand...lithium may be a great place to invest for the future.

Neo Lithium is well on its way to becoming one of the next lithium producers in the Lithium Triangle. The Tres Quebradas project is 100% owned by the company and was discovered in 2015, so this is not something that is just a concept project. A preliminary economic assessment was completed in late 2017 and an updated resource estimate (NI 43-101) was completed in July 2018 with a 227% increase in Measured and Indicated categories. The results of a Preliminary Feasibility Study were announced in March 2019 with a \$1.1 billion NPV at 8% discount rate (\$587 million NPV at 14%) and an Internal Rate of Return of 50%. In addition, a pilot plant began operations in 2019 resulting in 99.1 % lithium carbonate in the first batch, improving to battery grade lithium carbonate (99.6%

lithium carbonate) from the pilot plant in March 2020.

A long five year journey through discovery, evaluation, permitting and pilot plant has confirmed that this project has a high grade, low impurity deposit. The final feasibility study is currently underway and expected as early as Q1-2021 along with the final EIA for the final construction permit. The company believes that the Tres Quebradas project is the third highest grade project in the world and the chemical makeup of the deposit should result in low operating costs and resultant high profitability.

To confirm this sentiment, a subsidiary of Contemporary Amperex Technology (CATL), a leading Chinese battery manufacturer and technology company, entered into an equity subscription agreement in September 2020 to invest \$8.6 million in new equity in the company. CATL will have Board of Director representation and pre-emptive rights to participate in future equity offerings to maintain its proportionate ownership.

The investment by CATL increases the company's cash holdings to approximately \$37 million and aligns Neo Lithium with a significant global lithium-ion battery maker that specializes in the manufacturing of lithium-ion batteries for electric vehicles and energy storage systems, and battery management systems. It should also give the company access to additional expertise for future development.

There is no question that the world needs more lithium. As with any commodity, supply and demand are rarely in balance, so the best-in-class companies are always the lowest cost operators with the best resources. The company is one of 86 companies presenting at the 121 Mining Investment Online conference October 28-30, 2020. More exposure for a developing story and more investor interest is always good for a publicly listed company like Neo Lithium.

The Tesla led electric vehicle boom will lead to a tsunami of demand for the EV metal miners

The recent electric vehicle (EV) stock prices surge is telling a story. The story is one of change. The change is that electric vehicles are coming much sooner than many think. While EV manufacturer stocks have surged, battery manufacturers have done well, the EV metal miners are yet to jump. This presents one of the biggest investment opportunities of the 2020s decade, as a tsunami of demand hits the EV metal miners.

Tesla's (NASDAQ: TSLA) stock is up over 8 fold the past 14 months (up 492% the past 1 year) and is now the world's largest car company by market cap. Tesla is rapidly gaining market share and is severely production constrained, as shown by their over 650,000 Cybertruck orders, not to mention a backlog of orders for Model Y, Roadster 2 and Semi.

In fact it was reported yesterday: "Later this year, we (Tesla) will be building three factories on three continents simultaneously." This followed the Tesla Q2 earnings release with Tesla now achieving 4 quarters of consecutive profitability making them now eligible to join the S&P500, a move that would typically see a surge of Index funds buying the stock. Meanwhile other pure EV plays are also booming. Nikola Corporation (NASDAQ: NKLA) is up 285% in the past year and NIO Inc. (NYSE: NIO) is up 250%. Will Fisker (NYSE: SPAQ) be next?

Lithium-ion battery megafactories are being built as fast as they can to meet the surging battery demand. There is currently over 115 Li-ion battery megafactories either built or in planning until 2029. This equates to enough capacity to make 39 million EVs per annum by 2029. This is a massive increase on the 2.2 million electric cars sold worldwide last year.

As a result, shares of the leading battery manufacturers are flying higher. LG Chem is 57% higher the past year and Chinese giant Contemporary Amperex Technology Co., Limited ("CATL") is 174% higher over the past year.

The 2017 boom in EV metals was merely the entree. What is coming this decade is so much bigger. Nickel sulphate battery demand is set to lead the pack with a staggering **14x** increase in demand from 2019 to 2030. Aluminum, phosphorous, and iron will also be needed to meet the EV production surge. Copper demand for EVs is forecast to surge **10x** due to its use in electric motors, wiring, and charging infrastructure. Finally the other battery metals are all set for a surge in demand. These can perform the best as they are often smaller markets with supply constraints as most investors know with cobalt in particular highly reliant on the volatile and corrupt DRC.

- Graphite – A **10x** increase in battery demand from 2019 to 2030.
- Lithium – A **9x** increase in battery demand from 2019 to 2030.
- Cobalt – A **3x** increase in battery demand from 2019 to 2030.
- Manganese – A **3x** increase in battery demand from 2019 to 2030.

Note: Rare earths will also see a surge in demand as they are needed for powerful magnets in EV motors and wind turbines.

Bloomberg forecasts a tsunami of demand coming for EV battery

metals this decade



When have you ever heard of a car manufacturer publically saying this? Elon Musk's plea yesterday for mining companies is quoted below:

"Please mine more nickel.....Tesla will give you a giant contract for a long period of time if you mine nickel efficiently and in an environmentally sensitive way."

Closing remarks

The EV boom is about to take off as EV prices become purchase price competitive with conventional cars by ~2022. The battery factory build out is well underway. What is lacking is investment into the EV miners to supply what will be the much needed raw materials, hence Elon Musk's plea to miners. Many investors don't understand to bring on a new mine to full production can take 5-10 years, compared to 1-2 years for an EV or battery factory. EV metals supply constraints will be the biggest obstacle that the EV boom will face this next

decade.

For investors the opportunity is now clearer than ever. Buy EV metal miners with quality assets in safe jurisdictions and with ability to scale rapidly to meet surging demand. While current producers are the safest and preferred way, the near term junior producers (developers) can offer tremendous returns, albeit with higher risk.

Disclaimer: The InvestorIntel Sr Editor Matthew Bohlsen currently owns shares in Tesla. The information in this article is general in nature and should not be relied upon as personal financial advice. For more information, contact Tracy Weslosky at info@investorintel.com.

Tesla's decision to source cobalt from Glencore raises concerns in the investment community about all electric vehicles

As we move towards electrification of the global transport fleet one of the biggest concerns is the sourcing of cobalt. That is because approximately 70% of the world's cobalt production comes from the Democratic Republic of Congo (DRC) – A country rampant with issues such as corruption, child labor and exploitation.

The recent Telsa's decision to source cobalt from Glencore, along with others (BMW, Samsung SDI, SK Innovation, GEM Co, and Umicore) is very concerning. It means that all these companies are totally reliant on the DRC (excluding BMW who has secured Glencore's Australian cobalt from Murrin Murrin) for cobalt. Furthermore it means that Glencore has locked in sales of about 82% of its current cobalt production, leaving very little available cobalt supply in the market.

The bigger question is: **'When will car and battery manufacturers and western governments start to support western cobalt miners?'** Until they do that the electrification of the transport sector will be heavily reliant on the DRC and China, which represents a huge risk to the supply chain.

There are several good quality cobalt options without resorting to the DRC and China. Yes they will need financing and support, but in the long run **some investment now is better than total disruption later.** For investors it would also be wise to support the non-DRC cobalt miners. Firstly they are generally very cheap right now, and secondly if they can make it to production they will have multiple battery and car manufacturers lining up to secure a safe supply of cobalt. They may even pay a premium for safe cobalt supply.

The following cobalt miners do NOT source cobalt from the DRC and are worth serious investor consideration.

Producers (and country source of cobalt)

- Sumitomo Metal Mining Co. (TYO: 5713 | OTC: SMMYY) – Sources from Philippines and Madagascar.
- MMC Norilsk Nickel PJSC (LSX: MNOD | OTC: NILSY) – Sources from Russia.
- Vale SA (NYSE: VALE) – Sources from Canada.
- Sherritt International Corporation (TSX: S | OTC: SHERF) – Sources from Cuba and Madagascar.
- Conic Metals Corp. (TSXV: NKL) – Sources from Papua New

Guinea.

- Korea Resources Corporation – Sources from Madagascar.

Juniors and potentially the next cobalt producers

- Aeon Metals Limited (ASX: AML)
- Ardea Resources Limited (ASX: ARL | OTC: ARRRF)
- Australian Mines Limited (ASX: AUZ | OTCQB: AMSLF)
- Bankers Cobalt Corp. (TSXV: BANC | OTCQB: NDEF)
- Blackstone Minerals Limited (ASX: BSX | OTC: BLSTF)
- BlueBird Battery Metals Inc. (TSXV: BATT | OTC: BBBMF)
- Brixton Metals Corporation (TSXV: BBB | OTCQB: BBBXF)
- Canada Nickel Company Inc. (TSXV: CNC)
- Canada Silver Cobalt Works Inc. (TSXV: CCW | OTCQB: CCWOF)
- Cassini Resources Limited (ASX: CZI) – To be acquired by OZ Minerals Ltd. (ASX: OZL | OTC: OZMLF)
- CBLT Inc. (TSXV: CBLT)
- Clean TeQ Holdings Limited (ASX: CLQ | TSX: CLQ | OTCQX: CTEQF)
- Cobalt Blue Holdings Limited (ASX: COB | OTC: CBBHF)
- First Cobalt Corp. (TSXV: FCC | OTCQB: FTSSF)
- Fortune Minerals Limited (TSX: FT | OTCQB: FT MDF)
- Fuse Cobalt Inc. (TSXV: FUSE | OTCQB: FUSEF)
- GME Resources Limited (ASX: GME)
- Havilah Resources Limited (ASX: HAV)
- Jervois Mining Limited (ASX: JRV | TSXV: JRV | OTCQB: JRVMF)
- Leading Edge Materials Corp. (TSXV: LEM | OTCQB: LEMIF)
- Power Group Projects Corp. (TSXV: PGP)
- Talon Metals Corp. (TSX: TLO) – Located in the USA

All of the above junior cobalt miners are located either in the safe jurisdictions of Canada or Australia and are featured on the InvestorChannel watchlist.

If the world wants to see a safe cobalt supply, free from the corrupt DRC issues, then the above junior cobalt miners will

need to be supported. Together they can solve the problem of +70% reliance on DRC cobalt. The support that is needed is start up project funding (start up CapEx). USA, Europe, and other western governments can step in and offer low rate long term debt funding, just as what Japan did to support the start up of rare earths miner Lynas Corporation. Until this happens we will continue to be at the mercy of the DRC and Chinese supply chain.

“Cobalt is a key critical material needed in lithium-ion batteries used to make electric vehicles (EVs) – The Tesla Model 3 is by far the world’s best selling electric car”

Closing remarks

Demand for cobalt is set increase about fourfold over the 2020s decade based on my model forecast (assumes EV market share reaches 36% by 2030). This will most likely lead to severe cobalt deficits. New cobalt supply is extremely hard to bring on quickly, especially given most cobalt is produced as a by-product of copper and nickel production.

Cobalt is on the US list of critical materials for a good reason. It is needed in aerospace, jet engines (and military applications), and is a key component in lithium-ion batteries (essential for EVs and consumer electronics). Yes the EV related battery industry is reducing the cobalt per battery; however the better quality NMC, NCA, and NMCA batteries all require cobalt to keep the battery safe. Not enough cobalt and you get thermal runaway (aka fire).

Just as what happened with uranium this year, and is likely to happen soon with rare earths; the US and Europe need to act now to develop a safe cobalt supply chain. If they don't act soon then the West will be totally at the mercy of the DRC/China supply chain, which makes the West very vulnerable should trade war issues, cobalt shortages, or other supply chain issues continue as I would expect will be the case. The

latest concern is that Glencore is now facing a Swiss corruption investigation related to its DRC activities. What would happen to cobalt supply if Glencore was halted in dealings with the DRC?

The world's leading Li-ion battery supply chain expert Simon Moores (Benchmark Mineral Intelligence) appeared before the US Senate again last week warning that the US domestic supply chain build out is far too slow and that the US risks being left behind.

Let's hope that the West finally wakes up before it is too late.

A breakthrough in longer lasting lithium-ion cathode materials brings 'the million mile battery' dream closer to reality

The biggest new trend in the electric vehicle (EV) and battery industry right now is 'the million mile battery'. The significance for the industry is huge. Imagine owning an electric car that can last for one million miles, or 1.6 million kilometers. This is a lifespan several fold longer than what current cars can offer. Owners will no longer need to worry about replacing their EV battery after 8-10 years.

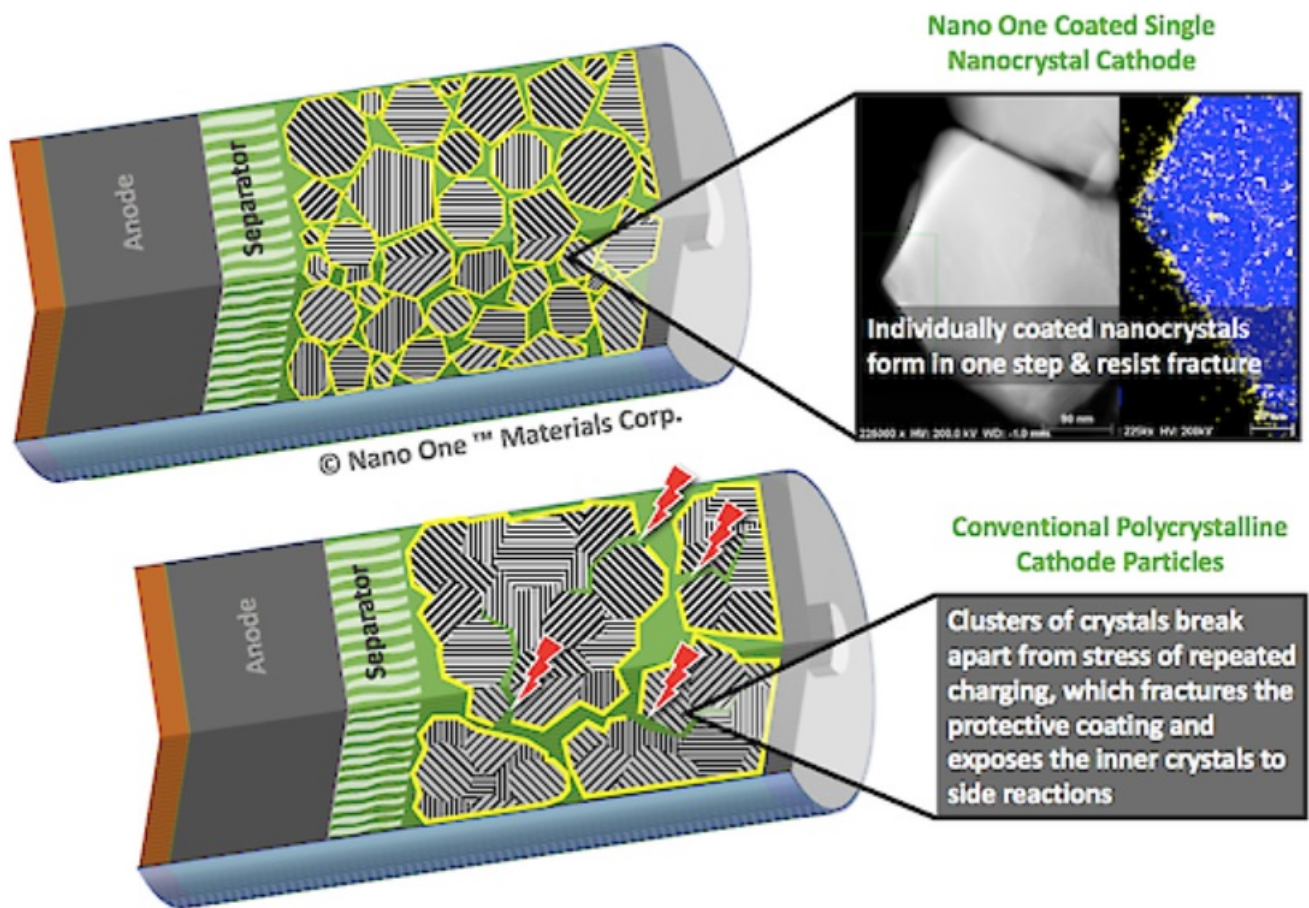
Even bigger is that fleet owners can own just one EV and run it for over 1 million miles. The taxi and trucking industry

will be lining up for million mile EVs as it would be economic suicide not to own one. The EV industry is set to celebrate the breakthrough of longer lasting more durable cathodes that lead to better batteries capable of fast charging and a million miles lifetime

Nano One Materials Corp. (TSXV: NNO) (NNOMF) has just announced a breakthrough in 'longer lasting' lithium-ion cathode materials. The Company has developed a coated single nanocrystal cathode material which provides protection against undesirable side reactions and the stresses of repeated charge and discharge cycling.

Nano One's patented One-Pot process combines all input components – lithium, metals, additives and coatings – in a single reaction to produce a precursor that, when dried and fired, forms quickly into a single crystal cathode material simultaneously with its protective coating.

Nano One's patented method to produce a single crystal cathode material with a protective coating



Source

Dr. Stephen Campbell, Chief Technology Officer of Nano One Materials Corp. stated:

“We are focused on optimizing this for NMC811 and I am pleased to present recent results that show how protective coatings on a robust crystal structure can make cathode powders more durable and longer lasting. **Increased durability is critical in enabling extended range, faster charging and even million mile batteries for electric vehicles.....**By forming protective coatings on individual nanocrystals, Nano One eliminates process steps and is engineering new materials with enhanced durability for various applications including electric vehicles. These are positive results and we are optimizing the materials for third party evaluation on the path to commercializing this technology.”

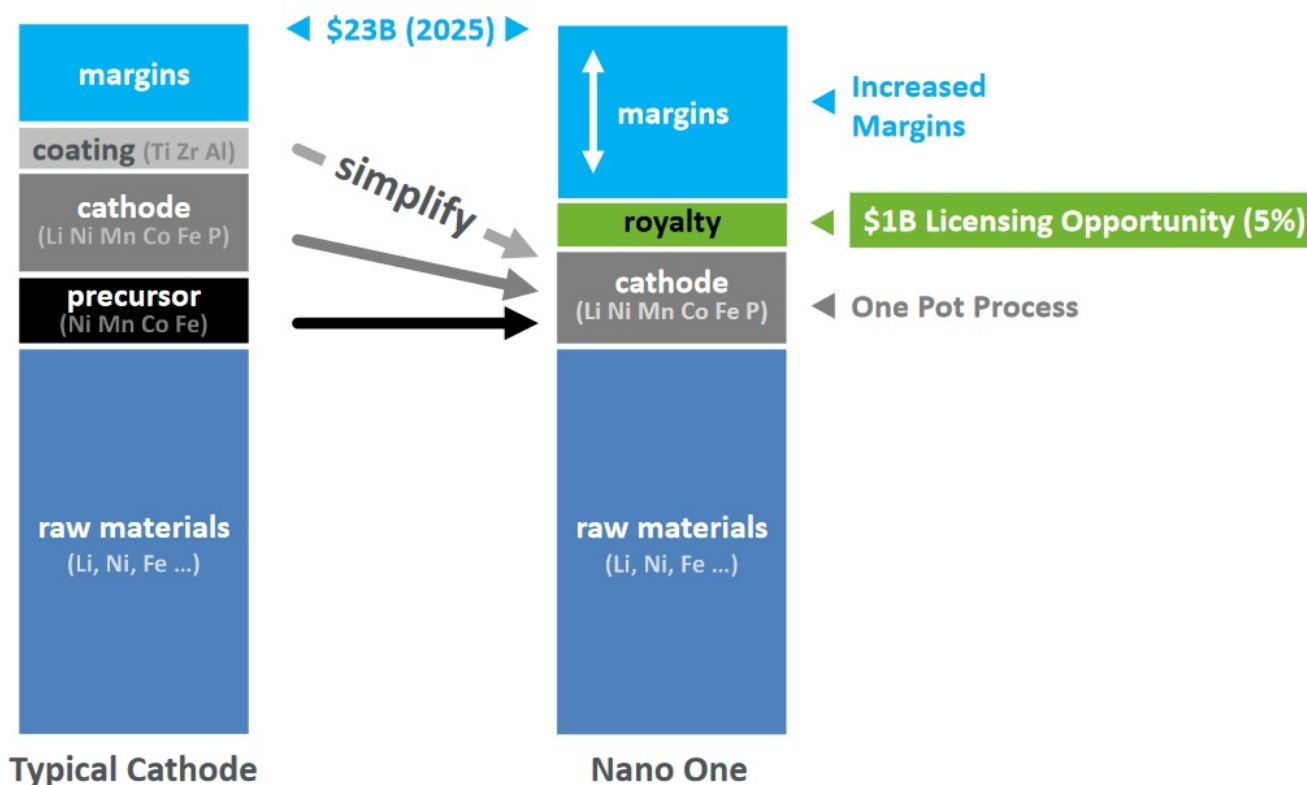
The issues of range, charging times, and battery longevity are

all critical to electric vehicles. This highly significant breakthrough, along with others, will lead to longer range, fast charging with less damage, and million mile batteries for EVs. The technology is really game changing in so many ways and should help pave the way for wider spread adoption of EVs in future years, especially for fleet operators such as taxis, buses, trucks, and other EVs that require heavy use.

Nano One is already very well partnered into the EV/battery supply chain via partnerships with industry giants such as Volkswagen, Pulead, Saint-Gobain and other undisclosed global automotive interests. Added to this recent raisings and government support means Nano One has about \$16 million of cash to further their patents, research and business plans & co-development activities.

Cathode manufacturers can enjoy increased margins even after paying Nano One a royalty

\$1B Licensing Opportunity



Source

Closing remarks

Nano One is leading the cathode industry with innovative and critical technological breakthroughs to make batteries better. The battery cathode market is forecast to be worth \$23 billion in revenues by 2025, and Nano One's goal is to achieve up to \$1 billion in licensing fees revenue for their patented cathode technologies. Given their progress so far that is looking like a highly achievable goal.

Nano One also works on the development of processing technology for the production of nano-structured materials. The Company is focused on building a portfolio of intellectual property and technology know-how for applications in markets that include energy storage, specialty ceramics, pharmaceutical, semiconductors, aerospace, dental, catalysts, and communications.

On a current market cap of only C\$110 million it is not too late for investors to get onboard. These are truly very exciting times for Nano One, and for the EV/battery industry as a whole. The big winner will also be the consumers of fast charging EVs with batteries that can charge faster and last a million miles or more. I can't wait to buy one myself.

[Publisher's Note: Special thanks for the rights to publish the above artwork from Brendon Grunewald of the Polar Conservation Organisation]

Surprise! Electric Vehicle

global sales continue to rise in spite of pandemic...

COVID-19 is causing huge disruptions to the global economy. Today I look at how COVID-19 (coronavirus) is impacting global electric vehicle (EV) sales and the EV metals supply chain. This includes a review of the EV metals: lithium, cobalt, graphite, nickel, neodymium and praseodymium

Global electric vehicle (EV) sales

Somewhat surprisingly global electric car sales actually rose by 16% in February, compared to February 2019. The results were a mixed bag. China's electric car sales plummeted 65% YoY and Europe sales boomed, rising a massive 111% YoY.

China usually makes up about 50% of global EV sales, and in February 2020 much of China was locked down due to coronavirus. This explains the dramatic fall in sales. Europe may follow to some degree in March EV sales, as coronavirus then moved to Europe during March, and China improved.

Also in March, we have seen a number of high profile EV manufacturers such as Tesla and Volkswagen close down some of their factories. This will impact March and April sales to some degree.

Tesla temporarily suspended production at Fremont and New York, but said superchargers, Nevada Gigafactory and their service centers would remain open. Tesla even started sourcing ventilators and donated hundreds of ventilators to California and New York City, as they began Model Y deliveries in the US.

My expectation is we will see weaker March EV sales from Europe, but stronger from China. As the coronavirus fades away (hopefully before mid 2020) we will see very strong EV sales by H2, 2020 and into 2021.

Tesla Model Y US deliveries began in March 2020 amid the coronavirus chaos



Impact on EV metals

The key EV metals (lithium, cobalt, graphite, nickel, and NdPr) have all been slightly but not severely impacted by COVID-19.

Demand

Demand has surprisingly remained solid helped by the strong February global electric car sales. Demand temporarily shifted in February towards Europe as China slowed. I expect this to reverse somewhat in March and April. Despite generally overall solid EV metals demand so far in 2020, many of the EV metals are still working off oversupply from 2019, which has led to lower prices for lithium, cobalt, and nickel in early 2020. Nickel has also been more impacted by the global slowdown, given its key demand is for stainless steel.

Supply

Whilst most mines have remained open there have been some

logistical supply issues as well as some government shutdowns. For example Argentina temporarily closed its mining sector which temporarily impacted several lithium miners operating in Argentina. The ban has now been lifted for miners deemed as “essential”. Chile and Australia have remained open. The DRC has remained open, as has Namibia despite some cautions they may close.

With regards to logistics and processing, China’s supply chain has been only mildly impacted, as not all of China was shutdown.

EV subsidies

We began 2020 with new German subsidies as well as tougher emission targets in Europe and China. This has helped 2020 EV sales. In March we had two significant new announcements:

- March 11, 2020 – The UK extended EV subsidies through to the 2022-23 financial year, with a grant of up to 35% of the vehicle’s value, capped at £3,500 (\$4,500).
- March 31, 2020 – China decided to extend the validity period of the subsidies on new energy purchases and NEV purchase tax exemption for two years.

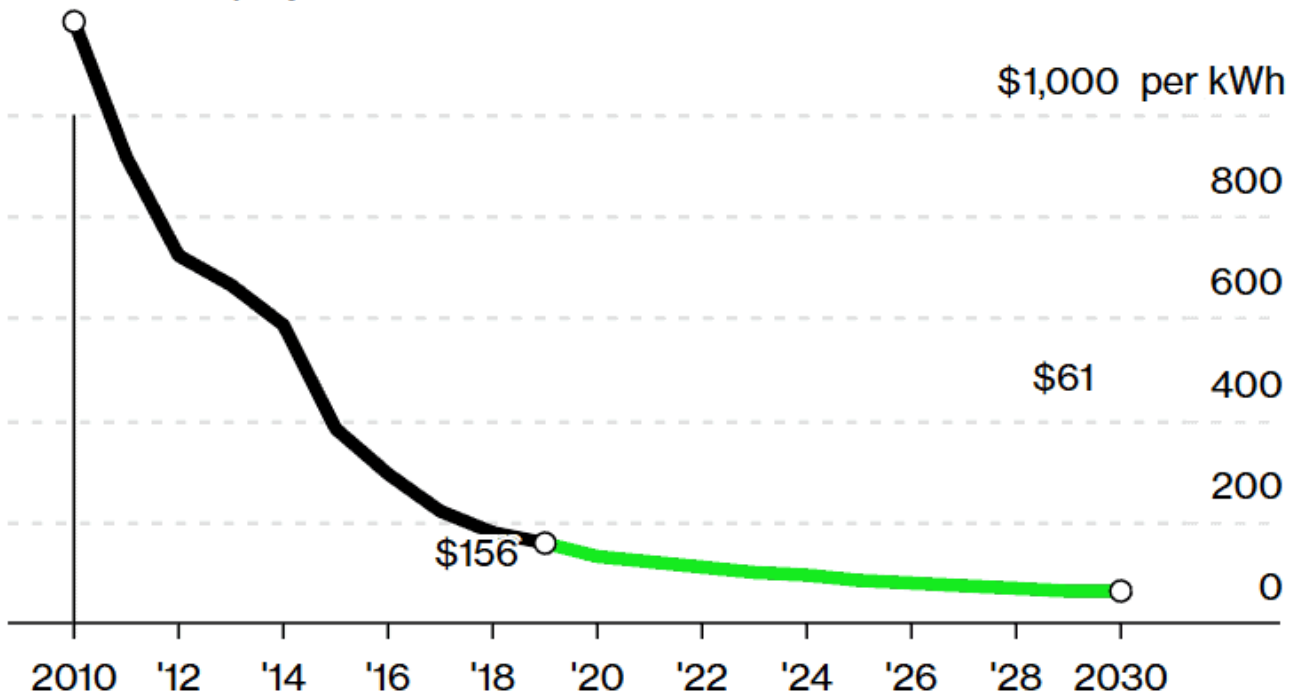
Note: The new Chinese 2 year subsidy extension news is still not widely known, and it will be a very significant boost to the Chinese EV sector.

Lithium-ion battery prices forecast by Bloomberg to fall to USD 100/kWh by 2023 making electric cars purchase price competitive to conventional cars by 2023

Charging Ahead

The cost of lithium-ion batteries continue to fall each year

real projected



Source: BloombergNEF

Note: 2019 USD prices

Source

Closing remarks

Despite the world currently being in or close to a recession, the EV sector has been doing surprisingly well. At least as far as EV sales and EV metals demand and supply. In terms of pricing, the EV metals are lower and the EV metal miners have also been heavily sold off.

Given that the share market has priced most EV metal miners very low, the EV trend remains strong, and EV subsidies have been extended or increased; I expect once the fear of coronavirus passes the EV and EV metals sector will rebound very strongly.

EV/Internal Combustion Engine (ICE) purchase price parity is just around the corner (2022-23). This means it will soon be the same price or cheaper to own an EV, with all the benefits

of much lower running and service costs. Investors would be wise to take a second look at the sector before it booms again soon.

Nano One's Dan Blondal on improving the performance, durability, and safety of lithium-ion batteries

"We use a process that is environmentally friendly, we have no waste stream, we combine all of the coating and crystallization and all of the preparation of nickel, manganese, and cobalt all into one step. So there are fewer steps, there's less energy consumed, less waste, and results in a longer-lasting battery material that could lead to more durable battery." States Dan Blondal, CEO, Director & Founder of Nano One Materials Corp. (TSXV: NNO), in an interview with InvestorIntel's Ron Wortel at PDAC 2020.

Dan went on to say that Nano One has developed intellectual property and patents to make battery materials that can improve the performance, durability, and safety of batteries. Dan also spoke on Tesla's million-mile battery. He said that Tesla has used cathode material supplied by a Chinese manufacturer in the battery. Dan continued, "Nano One has intellectual property and patents that have nanocrystalline coated material which is very much akin to what they were using except ours is commercially viable." Dan also provided an update on Nano One's other battery technologies. He said that the company is working on lithium iron phosphate

batteries used in electric buses, grid storage, etc. Nano One is also working on cobalt-free battery material which is aimed at next-generation solid-state batteries.

To access the complete interview, [click here](#)

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Dan Blondal on oversubscription and the increasing market support for Nano One's lithium-ion battery technology initiatives

In an InvestorIntel interview during PDAC 2020, Tracy Weslosky secures an interview update with CEO, Director & Founder Dan Blondal on Nano One Materials Corp. (TSXV: NNO), a technology company with patented technology for the low-cost production of high-performance lithium-ion battery cathode materials used in electric vehicles, energy storage, and consumer electronics.

Dan spoke on Nano One's patented technology which can improve the durability of battery cathode materials and could enable electric vehicle manufacturers to significantly increase the lifespan and driving range of their batteries. Market interest is coming back into the battery materials sector with the rise

in electric vehicle demand. Dan continued, “We have done a fantastic job by bringing Volkswagen and government funding into the company, and other partners. All that happened last year when it was really hard to get...”

Dan also provided an update on Nano One’s recently closed private placement which was oversubscribed by 80%. In addition to the proceeds from the private placement, Nano One has also received \$5 million in non-dilutive and non-repayable contributions from Sustainable Development Technology Canada.

To access the complete interview, [click here](#)

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