

# What's this about Johnson-Matthey exiting the EV battery cathode business?

written by Jack Lifton | November 13, 2021

The legacy carmakers and their supply base both face bankruptcy if they make the wrong decisions on entering the “transition to EVs” markets. This is because the OEM automotive industry is, along with semiconductor manufacturing, one of the most capital-intensive industries in the world. Just like with a 200,000 ton DWT ship, inertia being the problem on the one hand and prior deployment of massive amounts of capital being the issue on the other, the OEM automotive industry cannot change course in a short time, and so must be careful to choose the right path (allocation of capital) before starting the voyage.

The battery materials' *processing* markets were surprised yesterday by an unexpected announcement from the UK's most prominent technology metals' processor, Johnson-Matthey Ltd. (JM), that it was [withdrawing from the battery materials' processing market](#) due to its estimation that the return on capital from manufacturing lithium-ion battery cathodes would be too low to justify the allocation of capital required to do so. JM's stated reason for this decision was that the battery materials' business is becoming “commoditized,” so that JM's hoped for competitive advantage based on its specialized cathode manufacturing technology would either not materialize or not be good enough to be competitive.

But, even if so, It is the timing of this announcement that seems puzzling.

Both CATL, China's largest integrated battery manufacturer and

Umicore, Europe's largest battery materials *processor* have poor returns on capital in their respective battery business sectors, and this has been going on since both entered the battery business, so JM cannot have been surprised by this factor, and, in fact, should have taken it into account on day one of its foray into the battery materials' business.

So, what's it all about?

Large companies with either diversified products or vertical integration can distribute costs. Legacy OEM automotive EV makers, for example, like Germany's Volkswagen, which had a 5 billion Euro profit last year, can afford to lose some money introducing its EVs to the market at a loss per vehicle, while it tests both market acceptance and the lowering of manufacturing costs due to scaling up production.

Let's set aside my continuing accounting of [battery raw materials](#)' resources as woefully insufficient to support a transition to EVs, and concentrate on the OEM automotive industry's costs of bringing a new vehicle with any type of power train to market.

It is always multi-faceted crap shoot, and the history of government intervention in the car market is not one to inspire confidence.

Designing a new car and preparing to produce it costs billions of dollars and takes 3 to 6 years.

Government intervention in this market is always a compendium of what you can't do, not what you can. The U.S. and EU government's favorite regulatory intervention in the OEM automotive industry is the required "average miles-per-gallon" range for an OEM's output. This "standard" was first introduced to reduce the emissions of hazardous gases and then added the

reduction of the emission of particulates to its mandate. The current EV craze was actually the result of California's 1990's experimental legislation requiring the slow phase in of zero-emission vehicles. General Motors brought out a battery electric vehicle, the EV in the late 1990s, and Toyota introduced its "hybrid" Prius into the US (mainly California) market in 1997 to meet that mandate. The Prius, a hybrid, using, at first, a nickel-metal-hydride (the metal being a mix of rare earths) battery prospered. The EV with its lead-acid batteries and short range, 90 miles before needing a recharge, did not (It helped that GM lobbyists got California to suspend enforcement of the zero emissions mandate). GM had only leased its EVs; they were recalled and scrapped.

BEVs as a type went into hibernation until 2005 when Elon Musk decided that lithium-ion batteries were ready for prime time. Global Cooling became Global Warming and then Climate Change, and Musk's struggling, capital devouring, OEM automotive venture, Tesla, kickstarted a revival of a serious EV industry, something last seen by the great grandfathers of Detroit's, Wolfsburg's, Paris', and Tokyo's car industry leaders when they decided that Thomas Edison's Nickel-iron batteries were not practical for even their then short range motor cars. They knew that Rockefeller's gasoline and kerosene distribution system in "filling stations" was far more practical than Edison's expensive and hard to maintain DC generating stations except for trolley cars.

So, what's this got to do with JM's decision to pull out of the battery cathode business?

The answer is that JM has (correctly) concluded that the market, though large, is limited, and that very large profitable multi-product and/or vertically integrated or (whisper) state-supported companies are already driving prices down by

competition to get market share.

JM has concluded, again correctly, that most of the cars and trucks manufactured for the next generation will use internal combustion engines and that its core automotive exhaust emission catalytic converter business based on its dominance in the processing and use of platinum group metals is where it has the best competitive advantage and sunk costs.

The reputed costs to JM associated with building a Poland sited cathode plant were twice the industry average.

JM was once also in the rare earth processing business, and it exited that in the 1980s when the first Molycorp was losing its dominance to Chinese low-cost competitors. That was a wise decision then, and getting out of the lithium-ion battery cathode business before getting into massive non-recoverable debt is also a wise decision.

Finally, I would like to repeat my prediction that since the OEM automotive assemblers do not understand or want to understand that the manufacturing of EVs using lithium-ion batteries is limited by the availability of lithium, there will be a cull. The survivors will be those OEMs that can balance the production of their allocation of (raw materials' supply limited) EVs with ICE production profitably. BMW is my choice for the most likely survivor, because it has already announced that it will continue to produce a mix of powertrain choices in its vehicles. The rest, so far, are either going "all-electric" or eliminating ICE production and development. They chose poorly.

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# Giyani Metals CEO on huge market demand for manganese

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July 4, 2018 – “The market is very strong at the moment. I do not know if you noticed, but CATL listed in Hong Kong raising over a billion dollars. They are going to be the largest battery manufacturer. Demand is just going to be huge for the manganese units going forward.” states Robin Birchall, CEO & Director of [Giyani Metals Corp.](#) (TSXV: WDG), in an interview with InvestorIntel’s Peter Clausi.

**Peter Clausi:** We are here to talk about Gyiani Metals and manganese. You have 3 properties in Botswana.

**Robin Birchall:** That is correct. We have the K. Hill, Otse, and Lobatse.

**Peter Clausi:** Which is your favorite?

**Robin Birchall:** I would say my favorite is K. Hill. It is the most advanced of all of them.

**Peter Clausi:** Did you buy that in advanced stage or were you the ones who moved it along?

**Robin Birchall:** No, we have moved everything along. We have done all the drilling this year. We have done that in a very short period of time, about 4 months, completed our drilling at K. Hill. We are now drilling at Otse, which is our second property. Because we are under budget, cash and meters wise we are even going to drill at Lobatse.

**Peter Clausi:** Nice. You do not hear that too often. How many holes did you drill at K. Hill?

**Robin Birchall:** We drilled 18 holes there. One of which was a metallurgical hole. We have drilled now 4 holes at Otse, a good 3 holes left to do there. We plan probably about 6 at Lobatse.

**Peter Clausi:** Where do you assay those? Is it in country or do you ship them out?

**Robin Birchall:** No. They go to SGS, Randfontein in South Africa. All the samples have gone from K. Hill to SGS, Randfontein and we are waiting for them to come back. They will be back in the next 10 days.

**Peter Clausi:** It takes what, about a week for you to compile those into a press release?

**Robin Birchall:** Yeah, I am hoping to have some initial results. Yeah, that is our next press release will be something on the grades we are seeing in the holes.

**Peter Clausi:** That is often a major catalyst; looking forward to seeing that. Will that include the second drill program as well or just K. Hill?

**Robin Birchall:** No, K. Hill is for resource and Otse is where it is not quite exploration, but it is not quite enough to be a resource. It is really for us to understand that deposit a little bit better.

**Peter Clausi:** If I remember your press releases correctly, you were counting on premium pricing for your manganese given its quality.

**Robin Birchall:** That is correct. From the visual inspection we are pretty happy with what we have got there, but obviously the assays have to come back.

**Peter Clausi:** What do you see happening in the manganese market?

**Robin Birchall:** That is a really good question. The market is very strong at the moment. I do not know if you noticed, but CATL listed in Hong Kong raising over a billion dollars. They are going to be the largest battery manufacturer. Demand is just going to be huge for the manganese units going forward...to access the complete interview, [click here](#)

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