



ALL IN

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Whether we like it or not, agree or disagree; in the end it makes no difference as the articles contained in the links below make it clear that the use of fossil fuels to power the world may have much in common with the horse and carriage. One, as a practical means of transportation is already obsolete while the other is facing competition from multiple fronts in a variety of industries where commitments are being made to go “all-in on electric.”

The battery powered world is in its infancy where it is building a foundation and gaining a foothold in replacing fossil fuels as the preferred source of storing energy and powering the world’s future.

In this article I will concentrate on three separate industries; the Electric Battery (EB) sector, the Electric Vehicle (EV) sector and the Hazardous Waste sector created by batteries which have met their “end of life” usefulness.

To gain an understanding of the growth these three industries are currently experiencing it is important to view these industries as a puzzle where the pieces of the puzzle must come together to expose the full picture of both the “pros” and “cons” of 21st century travel!

The articles contained in the links below will outline Hundreds of \$Billions targeted to the three industries above. These are massive financial commitments being made by numerous multi-\$billion market cap corporations throughout the world hoping to capture a piece of the pie!

1. Corporations making \$Multi-Billion Commitments to the Electric Battery Industry (EB):

Daimler Orders \$22.8 Billion Worth Of Lithium-Ion Battery Cells

- <https://insideevs.com/daimler-orders-lithium-ion-battery-cells/>

Volkswagen Invests \$25 Billion in Battery Supplies to Bolster EV Agenda

- <https://www.greentechmedia.com/articles/read/volkswagen-25-billion-battery-purchase-electric-vehicles#gs.WCaaqOg>

Battery Mega factory Forecast: 400% Increase in Capacity to 1 TWh by 2028

- <http://resourceclips.com/2018/10/22/visual-capitalist-and-benchmark-mineral-intelligence-battery-megafactory-forecast-for-400-increase-in-capacity-by-2028/>

2. Corporations making \$Multi-Billion Investments in the Electric Vehicle Industry (EV):

Global carmakers to invest at least \$90 billion in electric vehicles

- <https://www.reuters.com/article/us-autoshow-detroit-electric/global-carmakers-to-invest-at-least-90-billion-in-electric-vehicles-idUSKBN1F42NW>

Volkswagen Boosts Electric Car Investment & Sales Goals — 22 Million Electric Cars By 2028

- https://cleantechnica.com/2019/03/13/volkswagen-boosts-electric-car-investment-sales-goals-22-million-electric-cars-by-2028/?utm_source=CleanTechnica+News&utm_campaign=ae0ebf20f2-Daily+Email+CAMPAIGN&utm_medium=email&utm_term=0_b9b83ee7eb-ae0ebf20f2-332088177

GM Must Adapt or Die: A Lesson for U.S. Automakers

- <https://www.forbes.com/sites/arielcohen/2018/11/30/gm-must-adapt-or-die-a-lesson-for-u-s-automakers/#4493b9c22c2d>

GM May Finally Be Serious About Electric Vehicles

- <https://cleantechnica.com/2018/11/27/gm-may-finally-be-serious-about-electric-vehicles/>

3. Two issues which must be overcome for these Industries to move forward!

There are two major issues facing the explosion we see in the Electric Battery Industry (EB), the Electric Vehicle Industry (EV) and the “Hazardous Waste Industry” generated by EV batteries reaching “end of life!”

The estimated yearly dramatic growth in EV sales, where many auto manufactures plan to convert 100% of their future auto sales entirely to Electric Vehicles will create an overwhelming demand for a supply of these Critical Metals.

The first issue is meeting future demand requirements directly associated with the limited supply of lithium, cobalt, and manganese which are classified as “Critical Metals” or “Strategic Metals” by the US Government. The US is heavily dependent upon the foreign supply of these metals to meet the demand generated by these three sectors.

BENCHMARK MINERAL INTELLIGENCE REPORT 2-5-2019

US Senate Committee on Energy and Natural Resources Committee: Subject: Outlook for energy and minerals markets in the 116th Congress.

- https://www.energy.senate.gov/public/index.cfm/files/serve?File_id=9BAC3577-C7A4-4D6D-A5AA-33ACDB97C233

New Pentagon Report Highlights Strategic Need for Battery Materials Targeted by American Manganese

- <https://americanmanganeseinc.com/new-pentagon-report-highlights-strategic-need-for-battery-materials-targeted-by-american-manganese/>

Department of Defense “Defense Industrial Base” Report Highlights Potential Vulnerabilities Including Raw Materials Supply

- <https://pubs.er.usgs.gov/publication/pp1802>

Although the current supplies of these metals are ample to meet the current demand, the dependency on a foreign supply puts future demand at risk at a time when they may be needed the most!

As the demand of these “strategic metals” begins to dwarf the declining supplies a “sense of urgency” will develop amongst competitors to purchase or create an additional supply by any means possible.

\$Hundreds of \$millions will be spent by mining companies on drilling and exploration in hopes of finding potential ore bodies which when discovered will require massive additional expenditures to develop a 43-101 resource which will require \$Billions more to create a producing mine which will then become a depleting asset!

This process takes years to complete and only a small fraction of these projects will ever see the light of day as a producing mine!

The second issue deals with the disposal of Electric Vehicle Batteries as they reach their “end of life.” These batteries are classified as “Hazardous Waste” by the US Government and have created massive potential expenditure for those who ultimately will be liable for the handling and disposal of this waste.

Numerous multi \$billion market cap companies throughout the world have spent years and undisclosed amounts of money in pursuit of a means to recycle and recover the “critical metal” content of these batteries; with no apparent success.

As a result of their failures these major corporations are budgeting to spend Hundreds of \$Billions for alternative means to dispose of the waste. None of the proposed expenditures will return these metals back to the battery manufacturers to be used to make brand new EV batteries.

Many of the proposals to deal with the end of life batteries are excellent projects which will become realities down the road. I believe these projects will be developed with new batteries best suited to meet their specific needs versus a solution to deal with an “end of life” hazardous waste liability where, at this point in time, no other viable option appears to exist or has been recognized as a solution to their problems.

Where 3 Million Electric Vehicle Batteries Will Go When They Retire?

- <https://www.bloomberg.com/news/features/2018-06-27/where-3-million-electric-vehicle-batteries-will-go-when-they-retire>

4. Recycling is Key to Supplying Demand for EV Battery Materials

- <https://investingnews.com/innspired/recycling-rising-demand-nickel-lithium-electric-vehicle-battery-materials/>

China launches pilot EV battery recycling schemes

- <https://www.reuters.com/article/us-china-autos-batteries/china-launches-pilot-ev-battery-recycling-schemes-idUSKBN1KF375>

Volkswagen Plans to Develop EV Battery Recycling Plant

This is an article dated 2-21-2019; I find it very interesting that they plan to build a recycling plant but do not yet have a process to recycle the batteries!

- <https://investingnews.com/daily/resource-investing/battery-metals-investing/manganese-investing/volkswagen-plans-automotive-sector/?mqsc=E4032354>

I believe it will soon become obvious that any Corporation or Country which intends to become a major player in the Evolution Revolution of the 21st Century in a Green Environment will inevitably arrive at the conclusion that they will not achieve their end objective unless they create an additional supply of Critical Metals to meet their needs.

For those who understand the contents of this article; this dilemma also represents a unique opportunity to turn an expensive liability into a very valuable asset if a process to recycle 100% of the “critical or strategic metals” contained within these “end of life batteries” is created and utilized as the solution to both issues described above!

If a process did exist a very valuable new supply of critical metals would be brought online where the “resource” would expand each year as the availability of “end of life” batteries grows exponentially! Imagine growing your resources each and every year without having to spend a dime in mining, exploration and development costs?

Let us also not forget that a mining resource is a finite project where the mine is depleted each year as a result of production.

You might say that if a process to recycle did exist then those who own the process would be in the mining industry where they would own the only mine in the world where the resource would automatically grow each and every year.

Who would then be recognized as the largest producer of “critical and strategic metals” in the world?

IRONICALLY; a solution does exist!

5. AMERICAN MANGANESE INC. (TSX.V: AMY | OTC US: AMYZF | FSE: 2AM) IS IN THE FINAL STAGES OF PROVING IT DOES HAVE SUCH A PROCESS!

In a nutshell; American Manganese Inc. (TSX.V: AMY | OTC US: AMYZF | FSE: 2AM) is proving itself as the solution to the hazardous waste issue where 100% of all cathode metals contained within the batteries are recovered and will be returned to the manufactures for use in new batteries creating a much needed supply of these critical metals.

American Manganese (AMY) has spent \$millions over many years in pursuit of an environmentally clean closed-loop process to not only create a dependable supply of these

Critical Metals; but offering a very valuable “green” side effect, which would save these corporations \$Billions in the disposal of their “Hazardous Waste” issues!

The Biggest SECRET in the Battery Metals Industry

The link below gives an excellent overview of American Manganese posted on HOWESTREET.com podcast 2-8-2019 titled; THE Biggest SECRET in the Battery Metals Industry

- <http://www.stockhouse.com/news/newswire/2018/11/01/the-biggest-secret-battery-metals-industry>

AMERICAN MANGANESE INC. ON THE THRESHOLD OF BECOMING A MAJOR PLAYER IN THE EV AND EB SECTORS!

6. American Manganese Patent:

With the patent approval AMY is in a class by itself where it can achieve 100% recovery at battery grade purity. Not only will this create an increase in the supply of Critical Metals necessary for battery production, but it will solve the issues associated with “Hazardous Waste” as all critical metals recovered will go into new car batteries where they will be needed the most!

- <https://www.marketwatch.com/press-release/american-manganese-achieves-significant-milestone-with-lithium-ion-battery-recycling-patent-2018-12-14>

7. Memorandum of Understanding:

American Manganese Inc. Signs Memorandum of Understanding with Battery Safety Solutions B.V.

- <https://www.marketwatch.com/press-release/american-manganese-inc-signs-memorandum-of-understanding-with-battery-safety-solutions-bv-2018-12-11>

HOWESTREET.COM PODCAST 2-8-2019

In the link below you will find a Podcast where Larry Reaugh discusses the **Pilot Plant** as well as links to the **American Manganese PowerPoint** and **Business Plan**

- <https://www.howestreet.com/2019/02/08/exciting-times-for-american-manganese-in-recycling-lithium-ion-batteries/>
- <http://www.mining.com/american-manganese-moves-forward-plans-recycle-lithium-ion-battery-materials/>

HOWESTREET.COM PODCAST 2-15-2019

CEO Discusses the Importance of Successful Stages 1&2 of Pilot Plant Operation: First steps towards commercialization

- <https://www.howestreet.com/2019/02/15/ceo-discusses-the-importance-of-successful-stages-12-of-pilot-plant-operation/>

CONCLUSION;

The Hundreds of \$Billions spent and committed by numerous corporations outlined in the articles contained in the links above make it very easy to understand that the corporate world is fully committed to and in the early stages of transitioning from a fossil fuel environment to an Electric Battery and Electric Vehicle future.

The two major issues of creating a much-needed supply of the Strategic Metals consumed in these batteries in conjunction with the recycling of the Hazardous Waste created by the “end of life batteries” are problems which, up until now, have had very few if any plausible answers.

Many years and \$Millions have been invested by American Manganese Inc. and Kemetco to develop and perfect a recycling process. On 12-14-2018 this work culminated with patent elevating American Manganese Inc. into a class by itself!

As a result; American Manganese Inc. is on the threshold of being recognized as the solution to overcoming several of the issues which plague and hinder the advancement of these industries.

The next few months are going to be very interesting times as the corporate world begins to realize the solution to many of their Multi-\$Billion issues can be found in American Manganese Inc.

As difficult as it may be for these corporations to recognize that there may be existing answers to their issues; I find it even more complicated to answer the one question I am constantly asked by everyone I introduce to the company; “with all things being equal, then how in the world can American Manganese Inc. (TSX.V: AMY | OTC US: AMYZF | FSE: 2AM), with a patent, have a market cap of only \$23,000,000 US and \$30,000,000 Can?”

Having worked with Larry Reaugh and being a shareholder in American Manganese for more than 10 years I have a pretty good idea that 2019 is going to be a very interesting year as the answer to the above question becomes obvious!

I ALMOST FORGOT;

For those of you who wonder about the corporate name being American Manganese Inc. you should know that there is also an excellent manganese project (strategic metal) called Artillery Peak in Arizona 100% owned by AMY.

Manganese as a critical metal is attracting much attention these days with Artillery Peak as a very large low-grade deposit where our process was first perfected and patented in four countries, the US, China, South Africa & Canada.

AMY's process proved so successful that the possibility exists where AMY may be in a position to compete "heads up" with China in the processing of electrolytic manganese dioxide and electrolytic manganese metal.

There is virtually no US production of these critical metals making the US totally dependent on a foreign supply, mainly China, to fill the void!

Suffice it to say, the future could show that Artillery Peak may have a life of its own as a very valuable spinoff in a separate company. Yeah, I know, the company is still worth only \$23,000,000 US and \$30,000,000 Can!

I will save this discussion for another day!

Below is a link to Stockwatch.com which is a website I use for quotes and news on AMY. You can also access the AMY website from here.

- <https://www.stockwatch.com/News/Item.aspx?bid=Z-C%3aAMY-2549379&symbol=AMY®ion=C>

Any information shared in this article is to be viewed as my own personal opinion. It is up to each of you to do your own research as in the end your opinion may vary from mine. I am biased as I am a shareholder in this company.

Anyone with questions can reach me at the phone number and e-mail address below.

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Mike,