The Inflation Reduction Act delivers a mixed bag of successes and failures for EVs and the green economy

written by Melissa (Mel) Sanderson | August 15, 2022

Did anyone besides me hear happy hollering last week? Probably so – the Democrats in the U.S.A. unexpectedly delivered a piece of legislation which, in the current conflicted context, can reasonably be called a win for the so-called green economy.

Also known as Build Back Better's Baby Brother in disguise, the bill does contain some important, and even some surprisingly positive provisions, such as: tax credits to encourage further deployment of wind and solar power, as well as development of geothermal (one of the surprises); tax credits to encourage businesses to source more of their energy needs from renewables; tax credits for carbon capture technology; and tax credits for the nuclear industry, with special reference to the new generation "mini-nukes," but also including older reactors, some of which would have been retired either this year or next (another surprise). So, big wins for the energy industry.

Now, some of the hollerings might not have been as happy as some of the provisions are markedly less positive. Most spectacularly, excluding both Tesla and Lucid Motors' high-value (and pricey) cars from the consumer tax credit. Although not explicitly named, GM's EV division also might find itself in difficulty, since the tax incentives are for cars made using inputs which do NOT come from "unfriendly" countries. Given China's 80% market share, that makes it pretty hard to qualify a made-in-America EV for the credit. This definitely is going to

solidify Elon Musk's conviction that the US government is out to get him, and could throw a spanner into Tesla's reported plan to source its rare earths and other materials from the Democratic Republic of the Congo, a country not on the official "friends" list (at least not yet…?) despite the recent visit by the Secretary of State.

Following along the same line, Congress missed yet again what is arguably the most important link in the green supply chain, and certainly the most fundamental, i.e., actual mining of rare earths and other critical materials such as lithium in the domestic US.

While there are various incentives already in place from prior legislation such as the Defense Production Act to spur research and development in separation and production technologies, and even funding for construction of a full-cycle separation/refining plant in the US, the failure to address the hostile climate toward actually MINING the materials needed for the refining plant continues to undermine the achievability of a viable US green economy. (Yes, those puns are intended).

Obviously, miners – senior as well as junior – would welcome financial incentives and/or government-sponsored assistance in attracting private investment to support development of new mines. But even more, companies would welcome recognition by Washington that without actually producing primary materials such as rare earths and lithium in the US, the separation and production facilities in the US are going mostly to process materials sourced elsewhere. Kind of defeats the purposes of shortening supply chains and securing reliable supply, doesn't it?

Of course, with mid-term elections approaching and seeming more up for grabs than usually is the case, the Democrats don't want

to risk alienating a core constituency (young “greens” and environmentalists) by appearing to promote digging actual holes in the ground. But – and especially if they manage to pull larger majorities out of these midterms (thanks more to errors by the Republicans than any genius on their part) – one has to hope that in the final two years of this Administration someone will courageously decide to tackle streamlining the regulatory process, providing clarity to companies and investors on a reasonably short development timeline and even, perhaps, incentivizing investment into the primary mining production segment of the “green” US economy.

Optimistic, you say? Agreed – but pragmatically speaking, without even such relatively minimal changes, it’s far from clear that the US will arrive where it says it wants to go.

Murchison Targets the Green Energy Metals in 2022: Cobalt, Copper, Nickel, Zinc and Silver.

written by InvestorNews | August 15, 2022

It seems of late that every time I get excited about the technicals of the gold chart and then go on to make a comment about it I quickly get taught a lesson in humility. Well, enough of that, there are plenty of other commodities out there and many of them are far more important to the future build-out of the green economy. I’m talking about key electric vehicle and

clean energy production and storage metals like nickel, copper, cobalt, and silver to name a few. Perhaps these commodities and their underlying prices will be a little kinder to me and not crash a day or two after I extol their virtues. Although nickel is trading at 5-year highs and copper isn't far off of its recent highs. At least cobalt is only near 3-year highs and well off the peak it reached in early 2018. So fingers crossed I'm not some sort of a short-term price jinx and fundamentals will rule the day.

A Canadian company developing numerous projects that provide exposure to cobalt, copper, nickel, zinc and silver is Murchison Minerals Ltd. (TSXV: MUR). Murchison is focused on the exploration and development of the 100% owned Brabant Lake zinc-copper-silver project in north-central Saskatchewan. The Company also owns 100% of the Haut Plateau de la Manicouagan (HPM) nickel-copper-cobalt project in Quebec and holds an option to earn 100% interest in the Barraute VMS exploration project also located in Quebec, north of Val d'Or. Saskatchewan and Quebec are two of the best mining jurisdictions in Canada and, arguably, in the world. Additionally, these projects are surrounded by excellent, established infrastructure.

The last time I had a look at Murchison I focused on the Betty Zone at Brabant Lake given that was where I saw the bulk of the news being generated at that time. So today we'll focus on the HPM project because that's been the source of most of the excitement for the Company over the last couple of months. The HPM property is located between Baie-Comeau and Fermont, Québec, about 20 km from an all-season road connecting the two communities, 8 km to railroad, and about 225 km to the Port of Sept Iles. The property is associated with the Manicouagan Metamorphic Complex and hosts several nickel-copper cobalt occurrences.

Most activity at the HPM project has been focused on the highly prospective PYC target area where the Company identified significant sulphide mineralization on the surface over a strike length in excess of 1.7 km. Assay results from its June prospecting program, from grab samples and short backpack drill core samples, feature assays as high as 1.27% nickel equivalent or 2.59% copper equivalent (0.79% Ni, 0.14% Cu, 0.15% Co) from 0.83 metres of backpack drill core. Assay results also confirm mineralization south-east of the PYC target at the newly discovered Dix showing, which assayed as high as 0.90% Nickel Equivalent or 1.83% Copper Equivalent (0.44% Ni, 0.39% Cu, 0.10% Co) from 0.45 metre of backpack drill core.

Source: Murchison Minerals Aug 16, 2021 Press Release

Following a successful capital raise of $4 million that closed in October, the Company is in an excellent financial position to unlock the potential of HPM. To that end, on November 2nd Murchison announced it had commenced a 3,550 m drilling program focusing on the PYC target while concurrently prospecting a number of significant geophysical anomalies that were identified on the HPM project during a 655 line-kilometre airborne electromagnetic survey completed earlier this year. To date, the Company has successfully completed seven drill holes totaling 1,599 m testing approximately 550 m of the airborne electromagnetic anomaly with significant pyrrhotite and minor chalcopyrite mineralization observed in all seven holes. A handheld portable Niton XRF (X-Ray Fluorescence analyzer that enables real-time, quantitative sample analysis in the field) confirms the presence of nickel, copper and cobalt within the sulphide intervals. Now we await the assays to learn just how much of those valuable commodities are present in these rocks.

One need look no further than the bidding war that broke out over Noront Resources and its nickel-copper-PGE project in neighbouring Ontario, where it looks like BHP Group Ltd will be the successful suitor, to understand the value of these types of resources. Granted Murchison has a bit of work ahead of them to define a comparable asset but that's why they only have a market cap of $22 million today. A successful winter drilling program at HPM could put Murchison Minerals on the radar of companies like BHP.

China is winning the war for the future.

written by Jack Lifton | August 15, 2022

The perennial key geopolitical and geoeconomics issues of the conflict among nation-states over the allocation of scarce critical natural resources have, in the last 25 years, been dramatically affected by the current wave of the globalization of the ownership and of the productive output of natural resources, primarily in Africa and South America. Contemporary globalization has worked very much in the favor of the Peoples' Republic of China (PRC). China's goal of self-sufficiency in all natural resources, technologies, and industrial manufacturing for the stated purpose of achieving total independence from the rest of the world is well on its way to success.

China has combined a coherent industrial policy, based on the above stated goal, and has given that policy a driver with what it calls "capitalism with Chinese characteristics," which turns out to be not profit-centered but national goal-centered

capitalism.

One result of Chinese goal-centered capitalism has been the decline of North America's and Western Europe's dominance as the industrial manufacturing and technological innovation centers of the world. The very same Chinese consumer market for manufactured goods that caused a boom for Western OEMs has been redirected to favor Chinese domestic OEMs to move China into its new era of the policy of dual circulation, the gradual substitution of domestic consumption for export markets.

Western politicians are frantic to keep their consumer products' boom going, so they are paying lip service to the notion of a consumer oriented free-market economy based on profit while more and more (disastrously) trying to manipulate that same consumer market demand without any real understanding of supply economics.

The best example of the failure of the Western approach is the looming and unnecessary energy poverty creating a political theme of an amorphous danger (aka as "boogeyman") called climate change, a "crisis" being used to attempt to manipulate consumer demand through concepts called "clean energy" and the "Green Economy."

Nowhere is there a better example of this than the current political mania for the electrification of transportation power trains. Self-described "experts" and "analysts" confidently predict the market penetration of so-called EVs, electric vehicles, over the next decade and well beyond. But these predictions fail miserably when analyzed through the prism of what is known about the existence, accessibility, volumes, and economics of deposits of the critical technology metals that would need to be present for such predictions to be viable. Further analysis of the current production, distribution and use

of electricity is necessary.

Ninety nine percent of the world's transportation runs on oil based fuels, the distribution of which is in effect universal. The same cannot be said for electricity.

The recent breathless coverage of weather "extreme" events, drought in California, hurricane in Louisiana, and flooding in New York and New Jersy have two things in common; one is that they are blamed on "climate change"; and a second thing, that no one in journalism seems to have noticed, that all of, and each of, these events have dramatically reduced or eliminated the flow of electricity to consumers in the affected regions, not just by generation reduction but primarily by disrupting the distribution of reliable electricity.

Imagine, for a moment, that you are a perceptive observer of the U.S. electrical energy production industry and of its distribution industry. (Note, you therefore couldn't and wouldn't be a mainstream media journalist). How would "greened" emergency services, for example, be able to fulfill their charge (excuse the pun) without reliable continuous electric energy production? The answer is that they will rely and always must rely on fossil fueled vehicles and localized electric generators.

Now further imagine that such fuels and vehicles have been made extraordinarily expensive due to the increased costs (due to supply reduction following forced demand reduction) of fossil fuels, storage batteries, and the need for reliable backup power generation.

The legacy power distribution systems of America and Europe cannot even today cope with extreme weather events and government paid emergency services can only function with off-the-grid power sources. China has a lesser problem, because its

electric power generation and distribution are being built on a national scale with exactly the problem, the interruption of power distribution, I am describing being considered and taken into account by China's industrial policy execution bureaucracy.

How would (will) a California city, such as Los Angeles, function in a heat wave/drought when the choice is between air conditioning or charging your electric car? The famous "Valley" society of the Los Angeles complex grew originally after World War II with "all electric homes."

How will steel, aluminum, and copper be mined, refined, and fabricated without baseload, continuous and reliable, electric power to sustain the enormous continuous drains of power that batteries cannot sustain? Such flows cannot be created or sustained by solar panels and wind turbines.

And note that without a steady increase in the production of copper, which is refined ELECTROchemically and melted in electric furnaces, there can be no clean or green energy transformation. And that there can be no production of the companion metals upon which our electronics depend without massive production of the base, structural metals, within which they occur in tiny quantities. So, paradoxically and ironically, mining will have to increase manyfold and baseload fossil and nuclear electric generation would have to be increased dramatically to sustain the flow of scarce technology metals for the "greening" of society.

There is, of course, an alternative. Electricity for air conditioning, lighting, and transportation can be allocated by privilege, I.e., economic class. The wealthy and their servants will have all that they need and the rest will simply exist in a dry, hot world of water and food rationing. Politicians by the

way will rate as “servants” of the wealthy. That must be what the Western politicians think, because that is the world they are creating.

The real question is: Will the climate change “crisis” collapse the fragile democracies of the West before anyone comes to their senses outside of China. Note that China already has secured sufficient supplies of all the metals it needs to avoid the supply crisis now barreling down on the West.

Quebec’s $6.7 billion Plan for a Green Economy is a huge boost for energy storage and EVs

written by InvestorNews | August 15, 2022

While Quebec Canada is known for its French influence and pro-mining sector, it is starting to become well known for its support for pro-green policies. Just recently the Quebec Government announced their $6.7 billion Plan for a Green Economy (2030 PGE).

As a part of the 2030 PGE, two of the most interesting announcements were Hydro-Quebec’s move towards energy storage and Quebec’s decision to ban the sale of new gasoline-powered cars from 2035. All of these recent Quebec pro-green policies are very positive for the energy storage, EV and battery markets; and also for the battery metal (and EV metal) miners;

especially those with projects in Quebec.

A summary of the Quebec Government's $6.7 billion Plan for a Green Economy (2030 PGE)

Source

Hydro-Québec's move towards energy storage using LFP batteries

On December 9, 2020, it was reported that Hydro-Québec announced the launching of a new subsidiary that specializes in energy storage systems in a bid to help speed up development of renewable power and commercialize technology it has developed over four decades.

A Reuters report quotes: "Hydro-Québec, Canada's largest electricity producer, on Wednesday entered the fast-growing market for storing renewable energy, where it could face competition from the likes of Tesla……Hydro-Québec aims to capture 10% of a niche market expected to reach $3 billion in the next 10 years."

Hydro-Quebec's new EVLO subsidiary will design, sell and operate storage systems aimed at other utilities, commercial and industrial markets for medium-and-large-scale storage. They intend to initially focus on North America and Europe.

Hydro-Québec is using lithium iron phosphate batteries (LFP). LFP battery is a type of lithium-ion battery using $LiFePO_4$ as the cathode material, and a graphite based anode. It means there is no use of nickel or cobalt, but still uses lithium and graphite.

Quebec to ban the sale of new gasoline-powered cars from 2035

The Quebec banning of 'new' gasoline cars from 2035 should mean that starting from 2035, 100% of new car buyers will buy electric vehicles (EVs). Of course EVs will be wildly popular well before then, especially post 2023 when they should hit purchase price parity with gasoline or diesel cars.

The Quebec Government stated: "….the 2030 Plan for a Green Economy (2030 PGE) along with its first implementation plan covering 2021-2026, backed by a budget of $6.7 billion over five years. The magnitude of the amounts earmarked for this electrification and climate change framework policy is indicative of the government's intent to make Québec a leader in the green economy by building on its major strength: its clean electricity."

Again this is another huge boost to the EV & battery manufacturers as well as the EV and battery metal miners. In the case of EVs, NMC (nickel, manganese, and cobalt) and NCA (nickel, cobalt, and aluminum) cathode batteries are currently the most popular in western markets as they offer the best energy densities. Lithium electrolyte and graphite based anodes are the usual other battery metals. Added to this would be the producers of rare earths neodymium-praseodymium (NdPr) used in EV motors. We should also add in copper as copper is integrally involved with clean energy and EVs. Finally, any companies that work in renewable energy and in particular emissions reductions.

Some potential winners from Quebec's support for energy storage and EVs

- Hydro-Quebec as an energy storage designer, seller and operator. Also their suppliers of LFP batteries.
- Potentially any Quebec based cathode, anode or battery manufacturers and/or EV manufacturers.
- Quebec based battery metal miners – Lithium, cobalt,

nickel, manganese, graphite, and aluminum.
- Energy storage and EV suppliers and miners, ideally in Canada and perhaps USA.
- Companies working in the pro-green economy sector.

Some companies that we follow at InvestorIntel that focus on the above areas include: Appia Energy Corp. (CSE: API | OTCQB: APAAF), Avalon Advanced Materials Inc. (TSX: AVL | OTCQB: AVLNF), Canada Silver Cobalt Works Inc. (TSXV: CCW | OTCQB: CCWOF), CBLT Inc. (TSXV: CBLT), Critical Elements Lithium Corporation (TSXV: CRE | OTCQX: CRECF), dynaCERT Inc. (TSX: DYA | OTCQX: DYFSF), Exro Technologies Inc. (TSXV: EXRO | OTCQB: EXROF), Global Energy Metals Corporation (TSXV: GEMC | OTCQB: GBLEF), Ideanomics Inc. (NASDAQ: IDEX), Imperial Mining Group Ltd. (TSXV: IPG), Kodiak Copper Corp. (TSXV: KDK), Nano One Materials Corp. (TSXV: NNO), Neo Lithium Corp. (TSXV: NLC | OTCQX: NTTHF), Neo Performance Materials Inc. (TSX: NEO), Nouveau Monde Graphite Inc. (TSXV: NOU | OTCQX: NMGRF), Search Minerals Inc. (TSXV: SMY), Vital Metals Limited (ASX: VML), and ZEN Graphene Solutions Ltd. (TSXV: ZEN).

Quebec Canada is supporting energy storage and electric vehicles etc with a $6.7 billion plan for a green economy

If you are a Quebec or Canadian company focused on the green energy sector then InvestorIntel would be happy to hear from you to see if we can get your company some greater exposure. Together we can make a better world.