Australia's Precarious Position: Navigating a Critical Minerals Market Meltdown

written by InvestorNews | February 26, 2024
Australia, often celebrated as the world's quarry, finds itself at a critical juncture as the prices of iron ore, nickel, and lithium, three of its most significant exports, have plummeted. This decline has not only exposed the inherent vulnerabilities of relying heavily on these commodities but has also highlighted the country's dependence on China, its largest buyer. This situation is further compounded by the realization that the wider global implications of such a downturn are largely overlooked by many in the field.

Power Australia: A flawed but welcome new law to fight climate change Down Under

written by Melissa (Mel) Sanderson | February 26, 2024 Australia has a new environmental law of the land. It may not be perfect but it is consequential. Keep in mind that eight years ago, the previous Government repealed the nation's environmental law which included a carbon pricing scheme.

Subsequent drastic climate events, including a punishing heat wave, huge fires which made international news and unprecedented strains on the power grid lent a sense of urgency to developing a new national environmental policy. Just as was the case in the United States, political change has turned a nation's policy from climate denier to climate change combatant. Furthermore, and not coincidentally, the new law, officially called the Climate Change Bill 2022 but known as 'Power Australia', has been promulgated by Labor (loosely speaking, read Democrats in the US), with help from the Greens, and isn't popular with Conservatives (read Republicans). But just as the Inflation Reduction Act miraculously passed both Houses in the US, so too did the Power Australia bill become law.

What does the Australian law do? Well, it aims to achieve a 43% reduction in emissions below 2005 levels by 2030, and net-zero by 2050, partially by mandating that 82% of Australia's electricity will be provided by a pantheon of renewables. It requires "climate benefits" to be measured annually but does not include stipulations for conducting such measurements. Nonetheless, the key objectives are broadly in line with other global commitments and the law puts Australia firmly back in the climate game.

According to press reports, "The law was broadly welcomed by business groups and the environmental movement." Climate Change Minister Chris Bowen said "Legislating these targets gives certainty to investors and participants in the energy market and will help stabilize our energy system."

No law is ever perfect, of course, and therefore this one has its critics. The main complaint about the law is that it doesn't include a "carbon count" mechanism. What does this mean? It refers to two important aspects not codified in the law, the first of which, as mentioned above, would be a version of a

carbon credit scheme encouraging companies to offset their carbon discharge. These are in place in the US and Canadian climate laws, and play an important role in encouraging the energy industry in particular to invest in renewables to avoid gradually increasing "carbon fines" on their operations.

Perhaps more importantly, the law doesn't deal with the so-called social cost of carbon emissions. This refers to a cost-benefit analysis conducted on proposed projects in which, if a project is deemed to result in increased carbon emissions, the social cost of carbon multiplied by the expected emissions is added to the cost of the project, while conversely, if the project reduces carbon emissions, the calculated carbon savings are deducted from the project cost. Particularly in public-private projects, this savings makes the project more attractive and reinforces carbon reduction market decisions.

In both the US and Canada, federally-funded infrastructure projects are required to perform the social carbon cost calculation, while in the US, 14 States, including California and New York, also use this measure. At the State level in California, the law also requires all privately funded infrastructure projects — including proposed mining activities — to apply the social calculus. The Biden Administration has set the social figure at \$76/ton, applicable to all federal projects. A new study conducted by researchers at the University of California Berkeley and the NGO Resources For The Future, published in 'Nature" this month, sets that cost at \$185/ton.

So what makes up the "social cost" of carbon? The short answer, according to Stanford University: the main components are what happens to the climate and how these changes affect economic outcomes, including changes in agricultural productivity, damage caused by sea level rise, and declines in human health and labor productivity. Although already hard enough to quantify, many

economists and social activists argue that this doesn't go far enough but should also include social justice factors — for instance, the human damage done by building highways through the heart of cities and isolating or destroying entire communities. The \$185/ton cited in the 'Nature' study attempts to include these factors, as well as (inter alia) risks to insurance companies resulting from sea level rise and persistent flooding.

So, back to Australia, where environmentalists hope that the social cost of carbon will be included in the implementing legislation setting the standards for measuring carbon reduction progress or lack thereof. Reportedly the national Infrastructure and Transportation plan already incorporates social cost considerations and could serve as a template for a national measurement standard.

In any event, this is a strong step for Australia in the fight to save the planet.

Finfluencers beware — Australian investors have a new social media sheriff

written by Stephen Lautens | February 26, 2024 It will come as no surprise that there are people who try to take advantage of investors and the market in creative and sometimes illegal ways. Some are as old as co-ordinated "pump and dump" market manipulation campaigns that have been around since the earliest days of the Vanderbilts. Others are new, like

predatory short selling.

One of the newest has attracted the attention of the Australian Securities and Investments Commission (ASIC). In 2021 the ASIC announced that its was <u>undertaking a review</u> of the growing number of online financial influencers to understand how they operated and how the financial services law applies to them. These "finfluencers" rose to prominence in 2020 when a group used the Reddit platform to deliberately drive up the price of GameStop to punish hedge funds that had shorted the company stock. These finfluencers have also proliferated on social media and other discussion board platforms, touting "hot stocks" and quick buck promises to the new generation of young investors who can effortlessly buy and sell shares online in their self-serve brokerage accounts.

In its review, the Australian Securities and Investments Commission found that apps like TikTok, Telegram and Twitter are increasingly being used by social media influencers who are being compensated for online buy recommendations directly by the companies they promote in cash or stock. Others engage in "dealing by arranging", where finfluencers promote a link for their followers to access an Australian financial services (AFS) licensee's trading platform to trade financial products. The finfluencer then receives a payment from the licensee for each click-through when buying the products through the link that accompanies a glowing buy recommendation.

As a result of their review of this increasing problem, this March the Australian Securities and Investments Commission published an <u>information sheet (INFO 269)</u> for social media influencers who discuss financial products and services online setting out how financial services laws apply them. It concluded that these types of online activities violate Australian securities laws, and violators can face stiff penalties

including hefty fines and up to five years in jail.

Some of these finfluencers have brazenly flouted their wealth and luxurious lifestyles from their unlicensed online advice-giving, making them prime targets for the ASIC, which warns that it "monitors select online financial discussion by influencers who feature or promote financial products for any misleading or deceptive representations or unlicensed financial services." The new guidelines published in the ASIC's information sheet make it clear it also applies to Australian financial services (AFS) licensees who use an influencer, who may also be liable for any misconduct by the influencer.

How big a chill this will place on the vast world of social media influencers is unclear, as is how deeply the rules will apply to other providers of financial information. Australia's example seems to make a distinction between the providers of financial commentary and those recommending or touting stocks. As the <u>ASIC explains</u>:

"You can share factual information that describes the features or terms and conditions of a financial product (or a class of financial products) without giving financial product advice. However, if you present factual information in a way that conveys a recommendation that someone should (or should not) invest in that product or class of products, you could breach the law by providing unlicensed financial product advice."

Where does this leave legitimate reporters and other financial sector commentators? While the new ASIC interpretation bulletin casts a seemingly wide net, writers and publications who do not give investment advice, recommendations, or receive compensation for positive reviews or driving clicks to a trading site, do not appear to be the ASIC's intended target. Analysis and reporting on corporate news (provided that it is not misleading) is an

important part of educating investors so they can make their own informed investment decisions. The ASIC's purpose is to protect investors and promote market integrity by controlling online influencers who profit from featuring or promoting financial products using aggressive, misleading or deceptive representations. The result will be that you may see fewer breathless "It's a buy!" quotes in financial reporting.

Australia is not the only jurisdiction concerned about the problem posed by social media tipsters, promoters, pumpers and finfluencers who have a direct financial interest in driving stock activity, commissions, or manipulating the market. Other security commissions are looking at the issue and making efforts to educate and curb the wild west of social media stock promoters, especially in the hot and overly-hyped areas of crypto and cannabis, and it may not be long before they too start to take a harder stance along the lines of Australia.

The web is a big place with lots of dark corners and bad actors, and has provided fast buck artists with the opportunity to reinvent and use old pump and dump or other market manipulation tricks on a whole new generation of young or gullible investors. It is overdue for a clean-up that separates financial information from naked and self-serving promotion by the so-called finfluencers.

All Eyes on Australia in 2022

as a Global Rare Earths Production Leader

written by InvestorNews | February 26, 2024

The rare earths sector, particularly the rare earth magnet metals (such as neodymium (Nd)), had a great 2021; but given that the electric vehicle (EV) and clean energy booms are just getting started, 2022 should be another strong year. The most powerful electric motor magnets used today are known as permanent magnets, and they typically are made of neodymium iron boron (NdFeB). Dysprosium (Dy) and praseodymium (Pr) are also commonly used in permanent magnets.

As shown below, neodymium prices had a very strong 2021 reflecting a very strong demand for permanent magnets used in powerful electric motors. It is interesting to note the correlations of price and EV car sales from the chart below especially when considering that the peak months for global electric car sales in 2021 were March, June, October, November, and most likely December (usually the best month of the year).

If you think electric car sales will boom again in 2022 and throughout the decade (as I do), then there is a strong case for owning the rare earth miners of these key magnet metals.

Neodymium 1 year price chart — Currently at CNY 1,110,000/t (USD 174,134/t)



Source: <u>Trading Economics</u> (red arrows by the author to show peak e-car sales months in 2021)

Where is the opportunity in rare earths?

Most <u>rare earths reserves</u> are found in China, followed by Vietnam, Brazil, Russia, India, Australia and the USA. Canada also has some rare earths. Most of the global <u>rare earths</u> production is from China followed by USA and Australia.

For Western investors, the two largest rare earths producing mines are owned by Lynas Rare Earths Limited (ASX: LYC) and MP Materials Corp. (NYSE: MP). A third smaller producer is Energy (NYSE American: UUUU | TSX: EFR), which, however, is a processor, not a rare earth miner.

For investors looking at the next potential rare earths producer then best to look to Australia and Canada. Today I will focus on Australia.

Australian rare earth miners

Lynas Rare Earths Limited (ASX: LYC) (Lynas)

Lynas is the second largest NdPr producer in the world. Lynas owns the Mt Weld rare earth mine and Concentration Plant in Western Australia (WA), one of the world's highest grade rare earths mines. Lynas ships concentrate from WA to their Malaysian plant for separating and processing into commercial rare earths' materials. As part of their 2025 plan, Lynas is progressing their new Kalgoorlie Rare Earths Processing Facility in WA as well as their LRE/HRE separation & specialty materials facility in the USA.

Boosted by strong prices and production (<u>5,461t of NdPr</u> in FY 2021), Lynas reported <u>record sales of A\$498 million and a record profit of A\$157 million</u> in FY 2021. I would expect this to continue in 2022.

Lynas is no longer cheap and trades on a market cap of $\underline{A\$9.69}$ billion, and a 2022 PE of 24.9. A top tier Western rare earths

(NdPr) producer.

Australian Strategic Materials Limited (ASX: ASM) (ASM)

Australian Strategic Materials is an emerging integrated producer of critical metals for advanced and clean technologies based in Australia and South Korea. ASM plans a "mine to metal" strategy to extract, refine and manufacture high-purity metals and alloys that they can then supply directly to global manufacturers. ASM plans to produce a range of high-purity metals, alloys and powders from their metals plant in South Korea. Products will include titanium, zirconium and rare earths, required for permanent magnet production with the raw materials initially sourced from the market. The plan is to later source some materials internally, notably from their flagship Dubbo Project.

The Dubbo Project deposit contains rare earths, zirconium, niobium and hafnium. The Dubbo Project is ready for construction, subject to financing. In December 2021 ASM announced an updated base case in which the 20-year life of mine is expected to achieve a <u>pre-tax NPV of A\$2,361 million</u> and a pre-tax project internal rate of return of 23.5%.

In November ASM <u>announced</u> the commissioning of their Korean Metals Plant in Ochang Province, South Korea. In December ASM <u>announced</u> they had formed a JV with Resource Corporation (KOMIR) (formerly known as Korean Resources Corporation (KORES)) to enable the supply of critical minerals and metals into Korea.

Korea is a tech-based manufacturing powerhouse, and this JV is very timely as non-Chinese tech manufacturers try to wean themselves from dependence on China-centric supply chains.

ASM trades on a market cap of A\$1.34 billion.

Arafura Resources NL (ASX: ARU) (Arafura)

Arafura own the shovel ready Nolans rare earths (NdPr) Project in the Northern Territory of Australia. Arafura is aiming to be a trusted global leader for sustainably mined and processed rare earth products and plans to mine and process ore to separated commercial oxides at a single site at their Nolans Project. The main focus being to produce NdPr oxide. The Project has all Federal & NT Environmental approvals secured and Government and Minister support for A\$300 million senior debt facility. Basically, the Project is ready to go subject to final project funding being secured. Subject to that funding, first production is targeted to begin late 2024.

Arafura trades on a market cap of A\$333 million.

An interesting side note to end on is that Arafura quote:

- "EV market growth is exponential: 10 to 40 times in the next 20 years. This will require 6—15 times more rare earth elements.
- Most EVs need about 1kg of rare earths for their motor magnets.
- Just 0.05% of the vehicle cost: but it can't run without it.
- Market analysts forecast a supply gap that represents 109% of global supply today and is in excess of 11 Nolans Projects."

Source: Arafura Resources October 2021 company presentation

Closing remarks

We should remember that in 2021 the Morrison led Australian Government <u>announced a A\$2 billion loan facility</u> for Australian critical minerals projects. These funds have the potential to help Australian rare earths juniors to move towards production.

Combine this with high magnet rare earths prices and surging demand, and we have all the ingredients for a strong 2022 from the Australian rare earths' miners.

The Post-COP26 World Looks To Australia For Future Non-Chinese Rare Earths Production

written by InvestorNews | February 26, 2024

To achieve U.N. climate change management goals the world needs to shift rapidly to clean energy, and that means we need to build or secure, reliable sources of rare earths. While the USA and Canada have made some progress in this direction, Australia will also be needed to play a key role.

When looking at a chart of rare earths reserves by country, China shows the largest reserves followed by Vietnam, Brazil, Russia, India, and Australia, in that order. The USA is ranked 8th and Canada is outside of the top ten. Given Australia's stellar track record as a reliable supplier of raw materials, it should not be surprising to know that the West is looking towards Australia to step up production of rare earths, especially those needed to support the surging cleantech sectors of electric vehicles, wind energy, and solar energy.

ClearWorld.us says it well, stating:

"Renewable energy development relies upon sufficient quantities of rare earth minerals, specifically neodymium, terbium, indium, dysprosium, and praseodymium. These are used in the production

of solar panels and wind turbines. If the world is to meet the greenhouse gas emissions targets sought in the Paris Climate Agreement the availability of these minerals must increase by 12 times by 2050."

(Emphasis by the author.)

Rare earths are key elements in the cleantech revolution

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Australian listed rare earths companies:

Producers

Lynas Rare Earths Limited (ASX: LYC) ("Lynas")

Lynas is the second largest neodymium and praseodymium ("NdPr") producer in the world. Lynas owns the Mt Weld rare earth mine, which is one of the world's highest grade rare earths' mines, and the Mt Weld ORE Concentration Plant, both located in Western Australia. Lynas also owns the Lynas Advanced Materials Plant (LAMP), which is an integrated manufacturing facility, separating and processing rare earths' materials in Malaysia. The Lynas 2025 growth strategy encompasses plans to build the Kalgoorlie Rare Earths Processing Facility (cracking and leaching) in Australia and an LRE/HRE separation and specialty materials facility in the USA. Lynas trades on a market cap of A\$7.3 billion.

Iluka Resources Ltd. (ASX: ILU) ("Iluka")

Iluka is a relatively new (April 2020) producer of rare earths at their Eneabba Project in Western Australia. Iluka intends to ramp to selling 50,000 tpa of a 20% monazite-zircon ore concentrate for further processing offshore. Iluka has an offtake agreement for 50,000 tpa. Iluka is working on developing

<u>a Phase 2</u> of the Eneabba Project which involves investigating techniques to beneficiate and purify the monazite to an 80% concentrate for sale further down the value chain. Iluka is mostly known for being an Australian heavy mineral sands, zirconium and titanium, producer. Iluka trades on a market cap of A\$3.5 billion.

Vital Metals Limited (ASX: VML) ("Vital")

Vital recently began mining ore at its Nechalacho' Mine in Canada's Northwest Territories (NWT), with commencement of ore processing at Vital's, under construction, Saskatoon cracking and leaching facility expected to begin in 2022. The Nechalacho Mine is a high grade, light rare earth (bastnaesite) project with a world-class resource of 94.7Mt at 1.46% REO (measured, indicated and inferred). Nechalacho's North T Zone, which is being mined by Vital, hosts a high-grade resource of 101,000 tonnes at 9.01% LREO (2.2% NdPr). Vital has a non-binding MOU with Ucore Rare Metals Inc. for the supply to it of a mixed rare rare earth carbonate, beginning H1 2024. Vital Metals trades on a market cap of A\$250 million.

Explorer/Developers (in alphabetical order):

Arafura Resources Limited (ASX: ARU) ("Arafura")

Arafura 100% own the Nolan's Bore rare earth project 135kms from Alice Springs in the Northern Territory, Australia. Arafura states: "The Project is underpinned by low-risk Mineral Resources that have the potential to supply a significant proportion of the world's NdPr demand. It is a globally significant and strategic NdPr project which, once developed, will become a major supplier of these critical minerals to the high-performance NdFeB permanent magnet market."

The deposit contains a JORC 2012-compliant Mineral Resources of

56 million tonnes at an average grade of 2.6% total rare earth oxides (TREO). 26.4% of the total rare earths contained are NdPr. The Project is <u>supported by</u> Export Finance Australia (EFA), and the Northern Australia Infrastructure Facility (NAIF), via non-binding letters of support for a proposed senior debt facility of up to A\$200 million and A\$100 million respectively. Arafura is looking to raise further funds to get the project started. Arafura recently <u>stated</u>: "The momentum with offtake discussion has enabled engagement to expand to include the options for strategic investment as part of the Nolan's project funding." Market cap is <u>A\$379 million</u>.

Australian Rare Earths Limited (ASX: AR3) ("AREL")

AREL is progressing in the exploration of a significant deposit of valuable 'clay-hosted' rare earth elements, located at their Koppamurra Project spread over ~4,000km² of tenements in South Australia and Victoria. Past exploration of the Koppamurra region has shown it contains mineralization containing the rare earth elements neodymium, praseodymium, dysprosium and terbium. The Koppamurra Project is an 'ionic clay' rare earth opportunity with a 2021 JORC <u>Inferred</u> Mineral Resource of 39.9Mt @ 725ppm TREO. AREL trades on a market cap of <u>A\$98 million</u>.

<u>Australian Strategic Materials Ltd.</u> (ASX: ASM) ("ASM")

ASM owns the Dubbo Rare Earths Project in NSW, Australia. The Dubbo Project is a 100% owned 'construction ready' poly-metallic and rare earths project with potential to become a key global supplier of specialty metals and rare earths. ASM's goal is a "mine to metal" strategy to extract, refine and manufacture high-purity metals and alloys, supplying directly to global technology manufacturers. Market cap is A\$1.92 billion.

Northern Minerals Limited (ASX: NTU)

Northern Minerals own the Browns Range heavy rare earth minerals project in Western Australia. Northern Minerals has built a pilot plant to test a number of deposits and prospects that contain high-value dysprosium and other Heavy Rare Earths (HREs) such as yttrium, hosted in xenotime mineralization.

The Company <u>states</u>: "Northern Minerals is positioned to become the world's first significant producer of dysprosium outside of China. Accounting for 60% of the Browns Range Project's (the Project) revenue, dysprosium is the key value driver of the Project and is at the core of Northern Minerals' marketing strategy. With a high value, high purity, dysprosium rich product, the Company is set to become a long term and reliable supplier of dysprosium and other critical heavy rare earths to world markets." Market cap is <u>A\$339 million</u>.

Peak Resources Limited (ASX: PEK)

Peak Resources 75% owns the Ngualla Tanzania rare earth project, which the Company <u>states</u> is one of the world's, largest and highest grade, undeveloped rare earth projects. The Ngualla Project has ore reserves of 18.5 million tonnes at 4.8% REO; 22% of the total mineral resource is NdPr, with an expected 26 year life of mine. The Project is currently at the funding stage having completed a BFS in 2017. The BFS summary details are here. About 90% of the Project's revenues will be coming from NdPr. Peak Resources <u>state</u>: "Operating cost of US\$ 34.20/kg NdPr* Oxide, demonstrating potential to be the world's lowest-cost fully integrated rare earth development project." Market cap is <u>A\$135 million</u>.

Closing remarks

With rare earths demand set to grow strongly this decade as the world moves towards cleaner energy and technology, investors would be wise to take a second look at the rare earths sector.

Australian critical minerals projects were recently in the news after the Government announced that they would receive an A\$2 billion boost (via a loan facility), to support the sector. This bodes well for the Australian rare earths junior miners to join Lynas as producers. Stay tuned as this sector looks set to shine this decade.