

# The High Cost of Neglecting ESG in Critical Minerals Projects and Cobalt Companies ESG Survey

written by Steve Mackowski | March 13, 2023

The article below provides some insight into the questions raised in the [Sustainability Program at PDAC 2023](#) and the price of “losing control” of a company’s Environmental, Social, and Governance (“ESG”) agenda as well as continues my series (now on part 4) on contacting Australian Stock Exchange-listed Critical Minerals companies to get their views on ESG.

## ESG and Critical Minerals Development – The Price of Lost Control

I was wondering how to answer a key question proffered in the Sustainability Program from PDAC 2023:

- How do you “Differentiate your company and attract investment through ESG performance and reporting?”

This is all around my previous concerns about losing control of the agenda by not being proactive with ESG; not being bold with ESG; others have taken control. This is pointedly identified in an article by Geoff Chambers, Chief Political Correspondent and Simon Benson, Political Editor in The Australian newspaper, Tuesday, March 7th, 2023. “[Investor Groups seek certainty on Labor safeguard mechanism](#)”. This is about an aggregation of some of the largest superannuation funds in Australia banding together to dictate woke ESG policy direction. Talk about lost

control. This is the price of lost control. What that will eventually cost, I'll try to discuss later, but to the point.

*“Australian investor groups representing members with \$US43 trillion in assets under management want the government to bolster the safeguard mechanism and avoid “greenwashing” by forcing heavy emitters to disclose time-bound climate transition plans.”*

I want you to think about “disclosure of time-bound climate transition plans”. Made me cringe!

1. You have to have a climate transition plan,
2. That plan is time-bound, and
3. The plan has to be disclosed.

And heaven forbid if this Investor Group (and its lobby groups) isn't satisfied with the details in the plan. It gets worse.

*“Where technology is not yet available, carbon credits will play a vital role in helping facilities meet their obligations and remain competitive,…”*

The cost of this lost control of the ESG agenda? I find it impossible to predict the timing of when the whole Net Zero process falls apart and we wake up to some sort of new, post-climate apocalypse awakening, new-normal. But it will. But in the meantime, you have to be ready to “disclose time-bound climate transition plans” that are acceptable to the Investor Group. Sounds impossible? Does to me. That means your finance has dried up. That's the cost of losing control. How long? Well, that depends.

# Achieving Operational Net Zero

So, you and I know that you cannot achieve net zero in your operations. You and I also know that you thought you only have two options going forward. One is to plug the gap by buying carbon credits. The other is to hope this whole movement will come to a true sense of realization and fall apart. Any thoughts on how you are going to include “not yet available technology” in your plan? There are also politicians who don’t want carbon credits allowed since “real” emissions reduction isn’t occurring.

You have to ask yourselves the question: “Am I prepared to regain control of the agenda?” If your answer is yes, then go back through my articles where I have told you what to do to demonstrate your ESG credentials. And if you need a good operating example, look at Ioneer Ltd posted in [Article 3](#) of this series. You need to get going. How much time (and hence money) do you have? Well, until the key part of the Net Zero program fails and its failure is seen as a death knell to the 2050 target. What is the key part?

## The HR Dilemma

Human Resources. The western world will come to a point where it will realize that it has taken 2 generations to completely overwhelm our education system with anti-STEM, pro-end of the world cataclysmic theories where fossil fuels are bad, development is bad, the future of the planet is at risk. OK, we have a self-induced climate change awareness revolution. But see the irony here? Who is going to fix it? Where is [STEM](#)? By creating the environment for the outrage around climate change we have decimated the education system that is needed to provide the resources required to fix it.

The following article by Simon Packham, Foreign Affairs and Defence Correspondent, again from The Australian newspaper, Tuesday, March 6th, 2023. "[Submarines 'need 108 Ph.D. level nuclear scientists per year'](#)". Not sure if this situation rings true in the US, but it should certainly be ringing alarm bells for those people who think that developing approximately 10 times our current world outputs for rare earths, lithium, vanadium, cobalt, copper, etc is a simple walk in the park. Where are the Human Resources coming from? So, the answer to when is the announcement that the Net Zero program failed is the timeline of acceptance of the Human Resources issue.

Oh, the Price of the Lost Control? Your unrealized profits during this period. And more, much more.

## **ESG and ASX-listed Cobalt Companies**

The process of contacting key Australian Stock Exchange-listed Critical Minerals companies to get their views on ESG has continued this week. The table below for Cobalt will complete the first round of contacting key players. Future articles will hopefully cover the responses coming in, and possibly then contacting some of the lesser players. We will see how that goes. Previous articles 1-3 provide context for anyone who has missed that.

I have updated the Rare Earths reference table and am still to receive any responses. (***See Appendix A: ESG in Rare Earths development***)

I have updated the Lithium reference table to include the [response](#) of Ian Bucknell of Ioneer Ltd. (Thanks Ian.) (***See Appendix B: ESG in Lithium development.***)

I totally recommend people interested in ESG to read the Ioneer

[2022 Sustainability and ESG Report](#). Their approach using the Towards Sustainable Mining (TSM) framework is first class and looks to have today's ESG needs well covered.

I have updated the Vanadium reference table and have received no responses to date. **See Appendix C: ESG in Vanadium development)**

Below is the Cobalt reference table. In the next issue, we will allow access to the tables via links and similarly with the ESG responses from the queried companies.

## Cobalt Companies

Cobalt Company (Ticker link to Share Price History)	Web Site	Mkt Cap AUS\$ (Mar. 12, 2023)	ESG Response
A-Cap Energy Ltd ( <a href="#">ASX: ACB</a> )	<a href="http://www.acap.com.au">www.acap.com.au</a>	\$73.24M	Queried Mar 12
Aeon Metals Ltd ( <a href="#">ASX: AML</a> )	<a href="http://www.aeonmetals.com.au">www.aeonmetals.com.au</a>	\$25.33M	
Aus Tin Mining Ltd ( <a href="#">ASX: ANW</a> )	<a href="http://www.clararesources.com.au">www.clararesources.com.au</a>	\$14.22M	
Auroch Minerals Ltd ( <a href="#">ASX: AOU</a> )	<a href="http://www.aurochminerals.com">www.aurochminerals.com</a>	\$22.46M	

Ardea Resources Ltd ( <a href="#">ASX: ARL</a> )	<a href="http://www.ardearesources.com.au">www.ardearesources.com.au</a>	\$84.04M	Queried Mar 12
Artemis Resources Ltd ( <a href="#">ASX: ARV</a> )	<a href="http://www.artemisresources.com.au">www.artemisresources.com.au</a>	\$19.48M	
Anson Resources Ltd ( <a href="#">ASX: ASN</a> )	<a href="http://www.ansonresources.com">www.ansonresources.com</a>	\$253.56M	Queried Mar 12
Australian Mines Ltd ( <a href="#">ASX: AUZ</a> )	<a href="http://www.australianmines.com.au">www.australianmines.com.au</a>	\$21.04M	
Archer Materials Ltd ( <a href="#">ASX: AXE</a> )	<a href="http://www.archerx.com.au">www.archerx.com.au</a>	\$116.95M	Queried Mar 12
Blackstone Minerals Ltd ( <a href="#">ASX: BSX</a> )	<a href="http://www.blackstoneminerals.com.au">www.blackstoneminerals.com.au</a>	\$75.81M	Queried Mar 12
Castillo Copper Ltd ( <a href="#">ASX: CCZ</a> )	<a href="http://www.castillocopper.com">www.castillocopper.com</a>	\$18.19M	
Celsius Resources Ltd ( <a href="#">ASX: CLA</a> )	<a href="http://www.celsiusresources.com.au">www.celsiusresources.com.au</a>	\$22.29M	

Cobalt Blue Holdings Ltd ( <a href="#">ASX: COB</a> )	<a href="http://www.cobaltblueholdings.com">www.cobaltblueholdings.com</a>	\$122.25M	Queried Mar 12
Corazon Mining Ltd ( <a href="#">ASX: CZN</a> )	<a href="http://www.corazon.com.au">www.corazon.com.au</a>	\$8.79M	
Fe Ltd ( <a href="#">ASX: FEL</a> )	<a href="http://www.cufe.com.au">www.cufe.com.au</a>	\$25.83M	
Golden Deeps Ltd ( <a href="#">ASX: GED</a> )	<a href="http://www.goldendeeps.com">www.goldendeeps.com</a>	\$10.97M	
Greenstone Resources Ltd ( <a href="#">ASX: GSR</a> )	<a href="http://www.greenstoneresources.com.au">www.greenstoneresources.com.au</a>	\$25.36M	Queried Mar 12
GME Resources Ltd ( <a href="#">ASX: GME</a> )	<a href="http://www.gmeresources.com.au">www.gmeresources.com.au</a>	\$64.25M	Queried Mar 12
Havilah Resources Ltd ( <a href="#">ASX: HAV</a> )	<a href="http://www.havilah-resources-projects.com">www.havilah-resources-projects.com</a>	\$106.07M	Queried Mar 12
Hammer Metals Ltd ( <a href="#">ASX: HMX</a> )	<a href="http://www.hammermetals.com.au">www.hammermetals.com.au</a>	\$49.28M	Queried Mar 12
Jervois Global Ltd ( <a href="#">ASX: JRV</a> )	<a href="http://www.jervoisglobal.com">www.jervoisglobal.com</a>	\$332.68M	Queried Mar 12

Metalicity Ltd ( <a href="#">ASX: MCT</a> )	<a href="http://www.metalicity.com.au">www.metalicity.com.au</a>	\$5.19M	
Meteoric Resources NL ( <a href="#">ASX: MEI</a> )	<a href="http://www.meteoric.com.au">www.meteoric.com.au</a>	\$168.34M	Queried Mar 12
Marquee Resources Ltd ( <a href="#">ASX: MQR</a> )	<a href="http://www.marqueeresources.com.au">www.marqueeresources.com.au</a>	\$7.66M	
Platina Resources Ltd ( <a href="#">ASX: PGM</a> )	<a href="http://www.platinaresources.com.au">www.platinaresources.com.au</a>	\$11.22M	
Riedel Resources Ltd ( <a href="#">ASX: RIE</a> )	<a href="http://www.riedelresources.com.au">www.riedelresources.com.au</a>	\$9.60M	
St George Mining Ltd ( <a href="#">ASX: SGQ</a> )	<a href="http://www.stgm.com.au">www.stgm.com.au</a>	\$54.48M	Queried Mar 12
Trek Metals Ltd ( <a href="#">ASX: TKM</a> )	<a href="http://www.trekmetals.com.au">www.trekmetals.com.au</a>	\$26.20M	

## Appendix A: ESG in Rare Earths Development



Rare Earths Company (Ticker link to Share Price History)	Web Site	Mkt Cap AUS\$ (Mar. 12, 2023)	ESG Response
Alpha Hpa Ltd ( <a href="#">ASX: A4N</a> )	<a href="http://www.Alphahpa.com.au">www.Alphahpa.com.au</a>	\$574.95M	Queried Feb 15
ABX Group Ltd ( <a href="#">ASX: ABX</a> )	<a href="http://www.abxgroup.com.au">www.abxgroup.com.au</a>	\$25.71M	
Alkane Resources Ltd ( <a href="#">ASX: ALK</a> )	<a href="http://www.alkane.com.au">www.alkane.com.au</a>	\$392.21M	Queried Feb 15
Alchemy Resources Ltd ( <a href="#">ASX: ALY</a> )	<a href="http://www.alchemyresources.com.au">www.alchemyresources.com.au</a>	\$13.25M	
American Rare Earths Ltd ( <a href="#">ASX: ARR</a> )	<a href="http://www.americanrareearths.com.au">www.americanrareearths.com.au</a>	\$91.51M	Queried Feb 15
Arafura Rare Earths Ltd ( <a href="#">ASX: ARU</a> )	<a href="http://www.arultd.com">www.arultd.com</a>	\$1.23B	Queried Feb 15
Austin Metals Limited ( <a href="#">ASX: AYT</a> )	<a href="http://www.austinmentals.com.au">www.austinmentals.com.au</a>	\$4.54M	

Australian Mines Ltd ( <a href="#">ASX: AUZ</a> )	<a href="http://www.australianmines.com.au">www.australianmines.com.au</a>	\$21.04M	
Australian United Mining Ltd ( <a href="#">ASX: AYM</a> )	<a href="http://www.australianunitedmining.com.au">www.australianunitedmining.com.au</a>	\$5.53M	
Australian Strategic Materials Ltd ( <a href="#">ASX: ASM</a> )	<a href="http://www.asm-au.com">www.asm-au.com</a>	\$230.89M	Queried Feb 15
Encounter Resources Ltd ( <a href="#">ASX: ENR</a> )	<a href="http://www.encounterresorces.com.au">www.encounterresorces.com.au</a>	\$46.22M	
Enova Mining Ltd ( <a href="#">ASX: ENV</a> )	<a href="http://www.enovamining.com">www.enovamining.com</a>	\$4.69M	
Hastings Technology Metals Ltd ( <a href="#">ASX: HAS</a> )	<a href="http://www.hastingstechmetals.com">www.hastingstechmetals.com</a>	\$360.41M	Queried Feb 15
Iluka Resources Ltd ( <a href="#">ASX: ILU</a> )	<a href="http://www.iluka.com">www.iluka.com</a>	\$4.43B	Queried Feb 15

Ionic Rare Earths Ltd ( <a href="#">ASX: IXR</a> )	<a href="http://www.ionicre.com.au">www.ionicre.com.au</a>	\$126.41M	Queried Feb 15
Krakatoa Resources Ltd ( <a href="#">ASX: KTA</a> )	<a href="http://www.ktaresources.com">www.ktaresources.com</a>	\$12.13M	
Legacy Iron Ore Ltd ( <a href="#">ASX: LCY</a> )	<a href="http://www.legacyiron.com.au">www.legacyiron.com.au</a>	\$115.32M	Queried Feb 15
Lindian Resources Ltd ( <a href="#">ASX: LIN</a> )	<a href="http://www.lindianresources.com.au">www.lindianresources.com.au</a>	\$268.88M	Queried 15 Feb
Lanthanein Resources Ltd ( <a href="#">ASX: LNR</a> )	<a href="http://www.lanthanein.com">www.lanthanein.com</a>	\$17.16M	
Lynas Rare Earths Ltd ( <a href="#">ASX: LYC</a> )	<a href="http://www.lynasrareearths.com">www.lynasrareearths.com</a>	\$6.43B	Queried Feb 15
Minbos Resources Ltd ( <a href="#">ASX: MNB</a> )	<a href="http://www.minbos.com">www.minbos.com</a>	\$115.53M	Queried Feb 15
Mount Ridley Mines Ltd ( <a href="#">ASX: MRD</a> )	<a href="http://www.mtridleymines.com.au">www.mtridleymines.com.au</a>	\$11.68M	

Northern Minerals Ltd ( <a href="#">ASX: NTU</a> )	<a href="http://www.northernminerals.com.au">www.northernminerals.com.au</a>	\$223.92M	Queried Feb 15
Nova Minerals Ltd ( <a href="#">ASX: NVA</a> )	<a href="http://www.novaminerals.com.au">www.novaminerals.com.au</a>	\$93.91M	Queried Feb 15
Orion Metals Ltd ( <a href="#">ASX: ORM</a> )	<a href="http://www.orionmetals.com.au">www.orionmetals.com.au</a>	\$16.35M	
Peak Rare Earths Ltd ( <a href="#">ASX: PEK</a> )	<a href="http://www.peakrareearths.com">www.peakrareearths.com</a>	\$116.65M	Queried Feb 15
Platina Resources Ltd ( <a href="#">ASX: PGM</a> )	<a href="http://www.platinaresources.com.au">www.platinaresources.com.au</a>	\$11.22M	
Prospect Resources Ltd ( <a href="#">ASX: PSC</a> )	<a href="http://www.prospectresources.com.au">www.prospectresources.com.au</a>	\$99.39M	
Petratherm Ltd ( <a href="#">ASX: PTR</a> )	<a href="http://www.petratherm.com.au">www.petratherm.com.au</a>	\$13.04M	
RareX Ltd ( <a href="#">ASX: REE</a> )	<a href="http://www.clancyexploration.com">www.clancyexploration.com</a>	\$28.39M	

Sunshine Gold Ltd ( <a href="#">ASX: SHN</a> )	<a href="http://www.shngold.com.au">www.shngold.com.au</a>	\$10.47M	
Stavely Minerals Ltd ( <a href="#">ASX: SVY</a> )	<a href="http://www.stavely.com.au">www.stavely.com.au</a>	\$60.49M	
Tempus Resources Ltd ( <a href="#">ASX: TMR</a> )	<a href="http://www.tempusresources.com.au">www.tempusresources.com.au</a>	\$12.47M	
Todd River Resources Ltd ( <a href="#">ASX: TRT</a> )	<a href="http://www.trrltd.com.au">www.trrltd.com.au</a>	\$9.46M	
Venus Metals Corporation Ltd ( <a href="#">ASX: VMC</a> )	<a href="http://www.venusmetals.com.au">www.venusmetals.com.au</a>	\$26.71M	
Vital Metals Ltd ( <a href="#">ASX: VML</a> )	<a href="http://www.vitalmetals.com.au">www.vitalmetals.com.au</a>	\$122.57M	Queried Feb 15

## Appendix B: ESG in Lithium Development

Lithium Company (Ticker link to Share Price History)	Web Site	Mkt Cap AUS\$ (Mar. 12, 2023)	ESG Response
Aurora Energy Metals Ltd ( <a href="#">ASX: 1AE</a> )	<a href="http://www.auroraenergymetals.com">www.auroraenergymetals.com</a>	\$12.28M	
Australasian Metals Ltd ( <a href="#">ASX: A8G</a> )	<a href="http://www.australasiangold.com">www.australasiangold.com</a>	\$8.07M	
Ardiden Ltd ( <a href="#">ASX: ADV</a> )	<a href="http://www.ardiden.com.au">www.ardiden.com.au</a>	\$18.82M	
Argosy Minerals Ltd ( <a href="#">ASX: AGY</a> )	<a href="http://www.argosyminerals.com.au">www.argosyminerals.com.au</a>	\$920.38M	Queried Feb 26
Allkem ( <a href="#">ASX: AKE</a> )	<a href="http://www.allkem.co">www.allkem.co</a>	\$7.26B	Queried Feb 26
Arrow Minerals Ltd ( <a href="#">ASX: AMD</a> )	<a href="http://www.arrowminerals.com">www.arrowminerals.com</a>	\$10.47M	
Anson Resources Ltd ( <a href="#">ASX: ASN</a> )	<a href="http://www.ansonresources.com">www.ansonresources.com</a>	\$253.56M	
Australian Vanadium Ltd ( <a href="#">ASX: AVL</a> )	<a href="http://www.australianvanadium.com.au">www.australianvanadium.com.au</a>	\$153.60M	

BMG Resources Ltd ( <a href="#">ASX: BMG</a> )	<a href="http://www.bmgl.com.au">www.bmgl.com.au</a>	\$4.63M	
Benz Mining Corp ( <a href="#">ASX: BNZ</a> )	<a href="http://www.benzmining.com">www.benzmining.com</a>	\$49.49M	
Boadicea Resources Ltd ( <a href="#">ASX: BOA</a> )	<a href="http://www.boadicea.net.au">www.boadicea.net.au</a>	\$7.11M	
Cullen Resources Ltd ( <a href="#">ASX: CUL</a> )	<a href="http://www.cullenresources.com.au">www.cullenresources.com.au</a>	\$6.56M	
Core Lithium Ltd ( <a href="#">ASX: CX0</a> )	<a href="http://www.corelithium.com.au">www.corelithium.com.au</a>	\$1.75B	Queried Feb 26
De Grey Mining Ltd ( <a href="#">ASX: DEG</a> )	<a href="http://www.degreymining.com.au">www.degreymining.com.au</a>	\$2.19B	Queried Feb 26
Devex Resources Ltd ( <a href="#">ASX: DEV</a> )	<a href="http://www.devexresources.com.au">www.devexresources.com.au</a>	\$101.96M	
Dart Mining NL ( <a href="#">ASX: DTM</a> )	<a href="http://www.dartmining.com.au">www.dartmining.com.au</a>	\$6.86M	
European Metals Holdings Ltd ( <a href="#">ASX: EMH</a> )	<a href="http://www.europeanmet.com">www.europeanmet.com</a>	GBP72.64M	

Essential Metals Ltd ( <a href="#">ASX: ESS</a> )	<a href="http://www.essmetals.com.au">www.essmetals.com.au</a>	\$127.12M	
European Lithium Ltd ( <a href="#">ASX: EUR</a> )	<a href="http://www.europeanlithium.com">www.europeanlithium.com</a>	\$111.84M	
EV Resources Ltd ( <a href="#">ASX: EVR</a> )	<a href="http://www.evresources.com.au">www.evresources.com.au</a>	\$14.04M	
Global Lithium Resources Ltd ( <a href="#">ASX: GL1</a> )	<a href="http://www.globallithium.com.au">www.globallithium.com.au</a>	\$320.83M	
Galan Lithium Ltd ( <a href="#">ASX: GLN</a> )	<a href="http://www.galanlithium.com.au">www.galanlithium.com.au</a>	\$349.95M	
Hannans Ltd ( <a href="#">ASX: HNR</a> )	<a href="http://www.hannans.com">www.hannans.com</a>	\$31.33M	
Hawkstone Mining Ltd ( <a href="#">ASX: HWK</a> )	<a href="http://www.hawkstonemining.com.au">www.hawkstonemining.com.au</a>	\$134.34M	
Infinity Lithium Corporation Ltd ( <a href="#">ASX: INF</a> )	<a href="http://www.infinitylithium.com">www.infinitylithium.com</a>	\$48.57M	
Ioneer Ltd ( <a href="#">ASX: INR</a> )	<a href="http://www.ioneer.com">www.ioneer.com</a>	\$672.22M	<a href="#">Reply Feb 28</a>



Jindalee Resources Ltd ( <a href="#">ASX: JRL</a> )	<a href="http://www.jindalee.net">www.jindalee.net</a>	\$154.92M	
Korab Resources Ltd ( <a href="#">ASX: KOR</a> )	<a href="http://www.korabresources.com.au">www.korabresources.com.au</a>	\$8.08M	
Krakatoa Resources Ltd ( <a href="#">ASX: KTA</a> )	<a href="http://www.ktaresources.com">www.ktaresources.com</a>	\$12.13M	
Li-S Energy Ltd ( <a href="#">ASX: LIS</a> )	<a href="http://www.lis.energy">www.lis.energy</a>	\$39.02M	
Lithium Australia Ltd ( <a href="#">ASX: LIT</a> )	<a href="http://www.lithium-au.com">www.lithium-au.com</a>	\$46.41M	
Lake Resources NL ( <a href="#">ASX: LKE</a> )	<a href="http://www.lakeresources.com.au">www.lakeresources.com.au</a>	\$838.27M	Queried Feb 26
Lanthanein Resources Ltd ( <a href="#">ASX: LNR</a> )	<a href="http://www.lanthanein.com">www.lanthanein.com</a>	\$17.16M	
Lepidico Ltd ( <a href="#">ASX: LPD</a> )	<a href="http://www.lepidico.com">www.lepidico.com</a>	\$74.47M	
Lithium Power International Ltd ( <a href="#">ASX: LPI</a> )	<a href="http://www.lithiumpowerinternational.com">www.lithiumpowerinternational.com</a>	\$201.54M	

Latin Resources Ltd ( <a href="#">ASX: LRS</a> )	<a href="http://www.latinresources.com.au">www.latinresources.com.au</a>	\$242.64M	
Liontown Resources Ltd ( <a href="#">ASX: LTR</a> )	<a href="http://www.ltresources.com.au">www.ltresources.com.au</a>	\$3.42B	Queried Feb 26
Mineral Resources Ltd ( <a href="#">ASX: MIN</a> )	<a href="http://www.mineralresources.com.au">www.mineralresources.com.au</a>	\$16.04B	Queried Feb 26
Metals Australia Ltd ( <a href="#">ASX: MLS</a> )	<a href="http://www.metalsaustralia.com.au">www.metalsaustralia.com.au</a>	\$26.13M	
Marquee Resources Ltd ( <a href="#">ASX: MQR</a> )	<a href="http://www.marqueeresources.com.au">www.marqueeresources.com.au</a>	\$7.66M	
Morella Corporation Ltd ( <a href="#">ASX: 1MC</a> )	<a href="http://www.morellacorp.com">www.morellacorp.com</a>	\$54.88M	
Neometals Ltd ( <a href="#">ASX: NMT</a> )	<a href="http://www.neometals.com.au">www.neometals.com.au</a>	\$370.34M	Queried Feb 26
Nova Minerals Ltd ( <a href="#">ASX: NVA</a> )	<a href="http://www.novaminerals.com.au">www.novaminerals.com.au</a>	\$93.91M	
Piedmont Lithium Inc ( <a href="#">ASX: PLL</a> )	<a href="http://www.piedmontlithium.com">www.piedmontlithium.com</a>	\$1.62B	Queried Feb 26

Pilbara Minerals Ltd ( <a href="#">ASX: PLS</a> )	<a href="http://www.pilbaraminerals.com.au">www.pilbaraminerals.com.au</a>	\$11.93B	Queried Feb 26
Power Minerals Ltd ( <a href="#">ASX: PNN</a> )	<a href="http://www.pepinnini.com.au">www.pepinnini.com.au</a>	\$29.98M	
Poseidon Nickel Ltd ( <a href="#">ASX: POS</a> )	<a href="http://www.poseidon-nickel.com.au">www.poseidon-nickel.com.au</a>	\$110.29M	
Prospect Resources Ltd ( <a href="#">ASX: PSC</a> )	<a href="http://www.prospectresources.com.au">www.prospectresources.com.au</a>	\$99.39M	
Red Dirt Metals Ltd ( <a href="#">ASX: RDT</a> )	<a href="http://www.reddirtmetals.com.au">www.reddirtmetals.com.au</a>	\$171.29M	
Rio Tinto Ltd ( <a href="#">ASX: RIO</a> )	<a href="http://www.riotinto.com">www.riotinto.com</a>	\$173.05B	Queried Feb 26
Reedy Lagoon Corporation Ltd ( <a href="#">ASX: RLC</a> )	<a href="http://www.reedylagonn.com.au">www.reedylagonn.com.au</a>	\$3.70M	
Strike Resources Ltd ( <a href="#">ASX: SRK</a> )	<a href="http://www.strikeresources.com.au">www.strikeresources.com.au</a>	\$20.43M	
Sayona Mining Ltd ( <a href="#">ASX: SYA</a> )	<a href="https://sayonamining.com.au/about/">https://sayonamining.com.au/about/</a>	\$2.00B	Queried Feb 26

Taruga Minerals Ltd ( <a href="#">ASX: TAR</a> )	<a href="http://www.targunaminerals.com.au">www.targunaminerals.com.au</a>	\$11.30M	
Tempest Minerals Ltd ( <a href="#">ASX: TEM</a> )	<a href="http://www.tempestminerals.com">www.tempestminerals.com</a>	\$12.81M	
Traka Resources Ltd ( <a href="#">ASX: TKL</a> )	<a href="http://www.trakaresources.com">www.trakaresources.com</a>	\$5.20M	
Todd River Resources Ltd ( <a href="#">ASX: TRT</a> )	<a href="http://www.trrltd.com.au">www.trrltd.com.au</a>	\$9.46M	
Venus Metals Corporation Ltd ( <a href="#">ASX: VMC</a> )	<a href="http://www.venusmetals.com.au">www.venusmetals.com.au</a>	\$26.71M	
Vulcan Energy Resources Ltd ( <a href="#">ASX: VUL</a> )	<a href="http://www.v-er.com">www.v-er.com</a>	\$902.21M	Queried Feb 26
Woomera Mining Ltd ( <a href="#">ASX: WML</a> )	<a href="http://www.woomeramining.com.au">www.woomeramining.com.au</a>	\$12.43M	
Zenith Minerals Ltd ( <a href="#">ASX: ZNC</a> )	<a href="http://www.zenithminerals.com.au">www.zenithminerals.com.au</a>	\$75.62M	

# Appendix C: ESG in Vanadium Development

Vanadium Company (Ticker link to Share Price History)	Web Site	Mkt Cap AUS\$ (Mar 12, 2023)	ESG Response
Aura Energy Ltd ( <a href="#">ASX: AEE</a> )	<a href="http://www.auraenergy.com.au">www.auraenergy.com.au</a>	\$170.43M	Queried Mar 4
Australian Vanadium Ltd ( <a href="#">ASX: AVL</a> )	<a href="http://www.australianvanadium.com.au">www.australianvanadium.com.au</a>	\$153.60M	Queried Mar 4
Golden Deeps Ltd ( <a href="#">ASX: GED</a> )	<a href="http://www.goldendeeps.com">www.goldendeeps.com</a>	\$10.97M	
Liontown Resources Ltd ( <a href="#">ASX: LTR</a> )	<a href="http://www.ltresources.com.au">www.ltresources.com.au</a>	\$3.42B	Queried Mar 4
Neometals Ltd ( <a href="#">ASX: NMT</a> )	<a href="http://www.neometals.com.au">www.neometals.com.au</a>	\$370.34M	Queried Mar 4
Protean Energy Ltd ( <a href="#">ASX: POW</a> )	<a href="http://www.proteanenergy.com">www.proteanenergy.com</a>	\$5.2M	
Pursuit Minerals Ltd ( <a href="#">ASX: PUR</a> )	<a href="http://www.pursuitminerals.com.au">www.pursuitminerals.com.au</a>	\$26.12M	Queried Mar 4
QEM Ltd ( <a href="#">ASX: QEM</a> )	<a href="http://www.qldem.com.au">www.qldem.com.au</a>	\$28.38M	Queried Mar 4
Red Dirt Metals Ltd ( <a href="#">ASX: RDT</a> )	<a href="http://www.reddirtmetals.com.au">www.reddirtmetals.com.au</a>	\$171.29M	Queried Mar 4
Sabre Resources Ltd ( <a href="#">ASX: SBR</a> )	<a href="http://www.sabreresources.com">www.sabreresources.com</a>	\$8.45M	
Santa Fe Minerals Ltd ( <a href="#">ASX: SFM</a> )	<a href="http://www.santafeminerals.com.au">www.santafeminerals.com.au</a>	\$4.95M	
SI6 Metals Ltd ( <a href="#">ASX: SI6</a> )	<a href="http://www.si6metals.com">www.si6metals.com</a>	\$8.22M	

Surefire Resources.NL ( <a href="#">ASX: SRN</a> )	<a href="http://www.surefireresources.com.au">www.surefireresources.com.au</a>	\$28.46M	Queried Mar 4
Syrah Resources Ltd ( <a href="#">ASX: SYR</a> )	<a href="http://www.syrahresources.com.au">www.syrahresources.com.au</a>	\$1.17B	Queried Mar 4
Technology Metals Australia Ltd ( <a href="#">ASX: TMT</a> )	<a href="http://www.tmtlimited.com.au">www.tmtlimited.com.au</a>	\$58.75M	Queried Mar 4
Tivan Limited ( <a href="#">ASX: TVN</a> )	<a href="http://www.tivan.com.au">www.tivan.com.au</a>	\$113.85M	Queried Mar 4
Triton Minerals Ltd ( <a href="#">ASX: TON</a> )	<a href="http://www.tritonminerals.com">www.tritonminerals.com</a>	\$45.63M	Queried Mar 4
Venus Metals Corporation Ltd ( <a href="#">ASX: VMC</a> )	<a href="http://www.venusmetals.com.au">www.venusmetals.com.au</a>	\$26.71M	Queried Mar 4
Vanadium Resources Ltd ( <a href="#">ASX: VR8</a> )	<a href="http://www.vr8.global">www.vr8.global</a>	\$33.91M	Queried Mar 4