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**Department of Industry, Science and Resources**

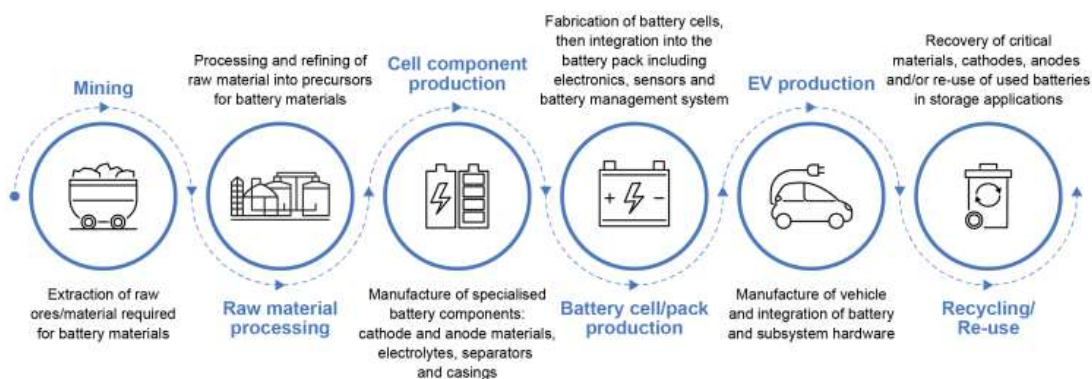
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**Consultation on National Reconstruction Fund**

The Electric Vehicle Council (EVC) welcomes the opportunity to provide feedback on the proposed scope of the National Reconstruction Fund.

The EVC is the national peak body for the electric vehicle (EV) industry in Australia. Our mission is to accelerate the electrification of transport for a sustainable and prosperous future. We represent members across the EV value chain, including car, bus and truck manufacturers, importers, operators, charging infrastructure suppliers and network providers.

In this submission, we focus on the various opportunities that exist for Australia in the EV value chain, which encompasses everything from mining and refining of critical minerals, to the production of batteries and EV components, the manufacturing of electric vehicles of all types, and ultimately the recycling of EV components to facilitate the re-use of critical minerals (see **Figure 1**).



*Figure 1. An overview of the EV battery value chain. IEA, [Global EV Outlook 2022](#) (2022).*

## Priority areas

The EV industry comprises several of the NRF priority areas, including renewables and low emissions technologies, transport and value-add in resources. Australia is already well-positioned to capitalise on the growing demand for critical minerals, with established dominance in the mining of lithium, nickel, and other key minerals required for EVs and clean energy technologies. However, to fully realise the economic opportunities provided by the energy transition, it is important for the country to expand its focus to include downstream opportunities in refining, processing, and manufacturing of battery components and vehicles, which is currently dominated by other players (see **Figure 2**). This would allow Australia to capture more of the value chain and increase supply chain resilience.

Country	Raw Materials	Battery manufacturing	ESG	Industry, innovation and infrastructure	Downstream demand	Overall ranking
China	1	1	17	9	1	1
Canada	3	8	6	4	10	2
US	6	4	16	5	2	3
Finland	9	15	2	1	11	4
Norway	18	10	1	3	7	5
Germany	21	6	4	7	2	6
South Korea	17	2	10	6	5	6
Sweden	21	9	3	2	8	8
Japan	13	3	8	12	8	9
Australia	2	15	9	13	11	10
France	24	10	5	10	5	11
UK	26	15	7	8	4	12
Czechia	23	10	11	11	18	13
Poland	24	5	15	16	15	14
Hungary	26	6	13	14	20	15
Chile	7	18	14	23	19	16
Turkey	15	18	21	15	13	17
India	13	10	26	21	13	18
Vietnam	20	10	20	18	17	19
South Africa	8	18	19	17	26	20
Brazil	4	18	23	22	20	21
Indonesia	5	18	22	27	25	22
Argentina	11	18	12	19	26	23
Slovakia	26	18	18	25	24	24
Thailand	26	18	24	20	16	25
Philippines	10	18	29	28	22	26
Mexico	16	18	27	26	23	27
Morocco	19	18	25	24	28	28
DRC	11	18	30	29	30	29
Bolivia	26	18	28	30	28	30

Figure 2. BNEF Global Lithium-Ion Battery Supply Chain Ranking. [BNEF](#) (2022)

In addition to capturing downstream opportunities, it is also important to focus on building a sustainable battery supply chain. This includes investing in research and development to assist with commercialising second-life applications for batteries, as well as developing the necessary infrastructure and capabilities for onshore battery recycling. Investing in these areas can provide significant domestic economic benefits and contribute to the reduction of environmental risks associated with end-of-life of batteries. This investment will also support the development of a circular economy.

## Investment needs and opportunities

### Critical Minerals

Demand for critical minerals spurred by the clean energy transition is expected to increase significantly in coming years, leading to the development of new mine sites and the expansion of existing operations. Australia's abundance of critical minerals vital to the renewable energy and EV transitions will create job opportunities and stimulate economic growth in the communities where these operations are located, particularly in regional areas. It is important that these minerals are extracted and produced in a responsible and sustainable manner to minimise any negative social and environmental impacts. Accordingly, a key opportunity for Government investment includes building on existing success with the Clean Energy Innovation Fund to support low carbon energy sources and development of specialised zero-emissions vehicles to reduce the emissions intensity of mining operations.

### Mineral Processing and Manufacturing

There are significant opportunities further downstream in onshore minerals processing and refining, and manufacturing of key components of zero-emissions technologies (including batteries) have been recognised as a means to capture more of the value chain and related economic gains. The energy intensity and high capital outlay required to establish and sustain a mature industry in Australia will not be feasible without significant financial backing from private and public investors to support R&D and commercialisation to scale domestic production. Accordingly, Government support through the NRF will play a key role in de-risking investment across the EV value chain to enhance attractiveness of the industry to private investors.

### Circular Economy

Aligning with broader Government policy priorities, the NRF can play an important role in achieving emissions reduction targets and environmental objectives by funding the development of onshore recycling capabilities for EV batteries, providing support for industry innovation to reduce the life-cycle emissions of battery technology through second-life applications, and deliver additional employment opportunities for Australians. This is particularly important as global efforts work towards reducing the resource intensity of batteries and clean energy technology, increasing the need for recycled components to build more sustainable supply chains.<sup>1</sup>

## Returns, financial instruments and working with other investors

Ensuring long-term success is likely to require more sustained government involvement, particularly for industries that are nascent in Australia, such as vehicle and battery manufacturing, and recycling. The NRF can play a vital role in enabling Australian industry to become globally competitive in emerging technologies, particularly given the existing dominance in global markets by a limited number of countries.

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<sup>1</sup> See, e.g., European Parliament (2020), Proposal concerning batteries and waste batteries, repealing Directive 2006/66/EC and amending Regulation (EU) No 2019/1020, <https://eur-lex.europa.eu/legalcontent/EN/TXT/?uri=CELEX:52020PC0798>.

The various investment areas under the NRF will require different levels of risk tolerance, given the relative maturity of existing activities in each sector, and the potentially limited window to diversify global supply chains in battery manufacturing and other renewable technology manufacturing. Accordingly, the level of government involvement may depend on policy objectives related to supply chain resilience and the achievement of decarbonisation goals.

In addition to provision of zero/low interest rate loans and guarantees for projects that require longer time frames to reach profitability, more direct government involvement by way of an equity injection may assist to provide long-term support and ensure government is able to benefit from future commercial upside. In these instances, government will need to work with the private sector to ensure effective management of commercial risks, and alignment of projects with the national interest, through public-private partnerships.

## Complementary reforms

### Reviewing regulatory barriers

As co-investment with the private sector will persist throughout the energy transition, ensuring strong and consistent policy signals will serve to provide the investment certainty needed to drive innovative projects. To facilitate co-investment across the EV value chain, constraints on private sector investment should also be reviewed, including regulatory barriers such as foreign investment review processes (particularly in critical infrastructure sectors). Given the need to attract foreign investment it may be pertinent to review existing approvals processes to ensure activities are not unnecessarily constrained due to funding limitations, and that we provide fast-track investment opportunities for investors from other markets that are also seeking to accelerate the transition to clean energy and electric vehicles, for example – the United States.

### Creating downstream demand e.g. governments buying EVs

Establishing downstream demand will also be important to set strong policy signals and ensure longevity of a competitive battery and vehicle component manufacturing industry. While the domestic market may be comparatively small, the Government can also assist to improve supply chain transparency and establish connections with offtake partners within Australia and with key trading partners. In particular, Australia can leverage policy developments offshore including the *US Inflation Reduction Act*, which provides for significant tax credits to support the use of minerals and battery components sourced from free trade agreement (FTA) partners like Australia.<sup>2</sup>

### Strengthening partnerships in our regions and with our allies

Australia must capitalise on trade and investment opportunities from the EV transition and become a strategic partner of choice in the Asia-Pacific region, in addition to strengthening relationships with FTA countries. By leveraging longstanding trade and business relationships with regional partners that are already actively investing in the EV value chain, like Thailand, Indonesia, Singapore, Malaysia, and Vietnam, this will enable integrated industries that maximise comparative advantages of each country. Doing this will have the

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<sup>2</sup> US Government (2022), *Fact Sheet: The Inflation Reduction Act Supports Workers and Families*, <https://www.whitehouse.gov/briefing-room/statements-releases/2022/08/19/fact-sheet-the-inflation-reduction-act-supports-workers-and-families/>

effect of supporting economic development across the region and diversifying global supply chains, while strengthening regional security.

### Intergovernmental cooperation in Australia

Domestically, intergovernmental cooperation will serve to reduce duplicative approaches and ensure different regions can build on existing capabilities. The Government can complement existing work under the upcoming National EV Strategy, Critical Minerals Strategy and upcoming Battery Strategy to work with State and Territory counterparts to coordinate industry development, harmonise regulatory approaches and avoid inefficient expenditure. A key example includes the harmonisation of Australian Design Rules (ADRs) on vehicle width and steel axle mass to alleviate existing hurdles to local heavy vehicle manufacturing and assembly.<sup>3</sup> In this particular instance, the Electric Vehicle Council is seeking greater action by the Federal Government to bring about these rules changes for electric trucks and buses, to accelerate not only the decarbonisation of these fleets locally, by unlock investment in the local manufacturing of electric trucks and buses.

### Workforce transition

Another barrier that needs to be addressed is the potential workforce shortage to meet the needs of the energy transition. To enable capacity building, Government will need to work with industry to identify any skills gaps and create education and training programs that will provide current employees with the necessary skills and knowledge, as well as cultivate a new generation of experts who will be able to take advantage of the opportunities on offer, as well as support those working in declining industries to transition to new, green industries.

## Summary

The energy transition presents significant opportunities for economic growth and development, with major economies such as the United States, China, and the European Union already taking steps to capitalise on these opportunities by building capacity in emerging technology supply chains. To ensure Australia remains competitive, significant near-term investment is required across the entire EV value chain from both private and public sources, across to enable the necessary development of infrastructure, and the creation of new manufacturing and supply chain capabilities.

In summary, the Electric Vehicle Council recommends that the Federal Government leverages the NRF to:

- Create a local environment that attracts both domestic and international investment across the full EV value chain, from mineral extraction and processing to battery manufacturing and eventually electric vehicle manufacturing and assembly. This includes reducing regulatory barriers, providing policy certainty to investors, and offering specific incentives to de-risk early investment e.g. tax reductions.
- Identify opportunities to pursue public-private partnerships across the EV value chain, where the Australia public can benefit over the long-term through both increased job opportunities domestically, and return on investment.

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<sup>3</sup> See Electric Vehicle Council and Australian Trucking Association (2022), *Keeping shelves stocked in a net zero world*, [https://electricvehiclecouncil.com.au/wp-content/uploads/2022/01/ATA-EVC-Electric-trucks\\_Keeping-shelves-stocked-in-a-net-zero-world-1.pdf](https://electricvehiclecouncil.com.au/wp-content/uploads/2022/01/ATA-EVC-Electric-trucks_Keeping-shelves-stocked-in-a-net-zero-world-1.pdf)

- Underwrite guaranteed purchases of downstream products, including batteries and electric vehicles (cars, buses, trucks) to secure investment in local manufacturing.
- Explore consumer incentives that provide a bonus for domestic content, but that do not replace general incentives for all EVs given these policy levers are critical for accelerating the transition to EVs as soon as possible.
- Cooperate with regional partners and allies to solidify Australia's role in the global EV value chain, which may include supplying critical minerals to some partners to produce batteries and EVs overseas, while potentially importing vehicle chassis, batteries and components from other partners to assemble EVs locally.
- Pursue opportunities to create a circular economy that encourages second-life applications of EV batteries and components, and secures investment over the medium-to-long term in a domestic battery recycling industry that can supply recycled battery materials back into both the domestic and international EV value chains.
- Provide support to transition workforces in declining industries to upskill into new, green industries enabled through the creation of a domestic EV value chain.
- Enable intergovernmental cooperation across Australia to ensure we move beyond competing with each other, and seek opportunities to support all states/territories to capitalise on the transition to EVs.

We note that the Australian Government is also developing the Critical Minerals Strategy in parallel with the National Reconstruction Fund and National Battery Strategy, and encourage cooperation to ensure alignment between the strategies.

If you have any questions on this submission, please do not hesitate to contact Natalie Thompson, Senior Policy Officer, Electric Vehicle Council: [office@evc.org.au](mailto:office@evc.org.au)

Thank you for your consideration of our submission.

Yours sincerely,



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