



**CLIMATE ENERGY FINANCE**

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**Climate Capital Forum  
(Day 2 1.30pm Session)**

**The US IRA, Australia's  
response and the Budget**

**Smart Energy Council**

**4 May 2023**

# **Agenda: Global Energy Transition: the need for a strong public-private Australian budget response to the US IRA and EU Net Zero Industry Act**

1. Energy Technologies: China leads the world
2. The US IRA and EU NZIA (Net Zero Industry Act), India's PLI, South Korea and Japan's GX Roadmap
3. Australian Federal Budget – TUES 9 May 2023

=> Value-adding Critical Minerals pre-export: Australia as a Renewable Energy & Critical Minerals Superpower

# 1. China Leads the World in Electric Vehicles

China has produced and sold 6.5 million EV/PHEV in 2022; growth of 94% yoy.

China sold ~60% of the world's EVs in 2022.

29% of all China car sales in 1Q2023 were EVs

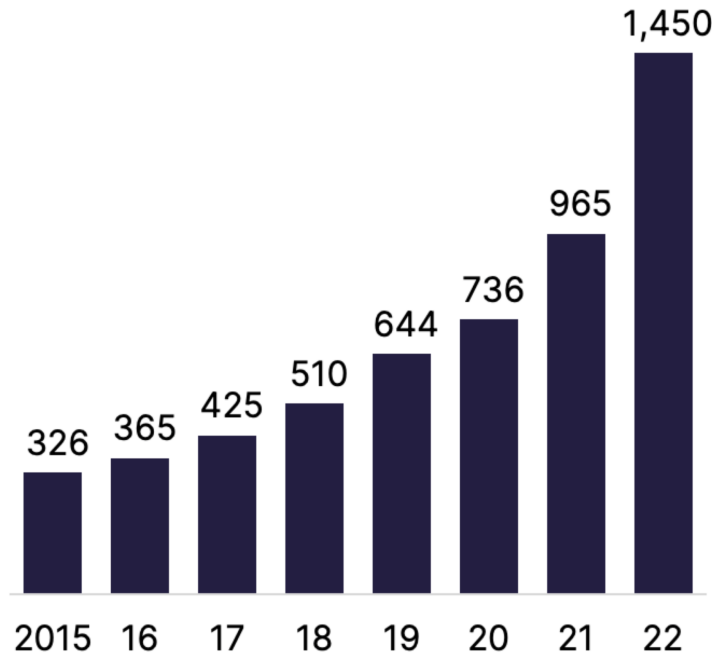
<b>China Vehicle Sales Statistics</b>	<b>1QCY2023</b>	<b>YoY</b>	<b>CY2022</b>	<b>YoY</b>
<b>Total Vehicle Deliveries</b>	6,076,000	-7%	26,864,000	2%
<b>Passenger Vehicles</b>	5,138,000	-7%	23,563,000	10%
<i>of which BEVs</i>	1,080,000	13%	5,033,000	82%
<i>of which PHEVs</i>	431,000	75%	1,515,000	152%
<b>Commercial Vehicles</b>	938,000	-3%	3,300,000	-31%
<i>of which BEVs</i>	72,000	53%	331,000	80%
<i>of which PHEVs</i>	1,000	-10%	4,000	11%
<b>Vehicle Exports</b>	994,000	71%	3,111,000	54%
<i>of which NEVs</i>	248,000	106%	679,000	120%

## 2. US Inflation Reduction Act 2022

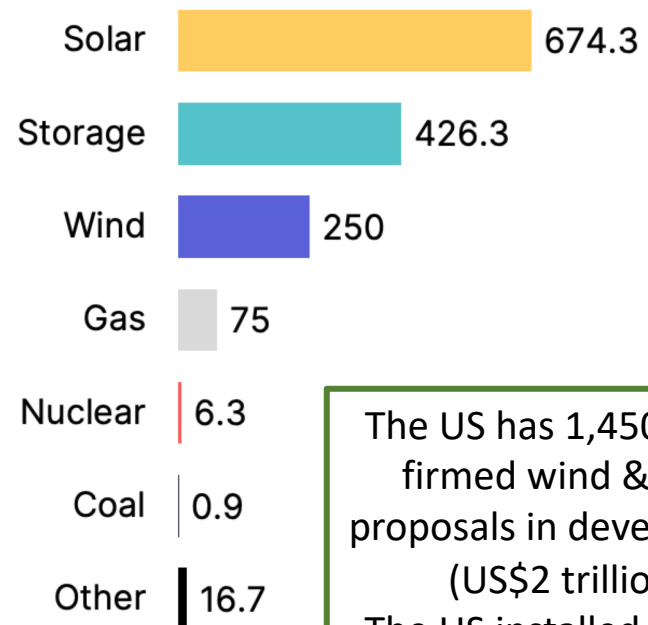
The US under President Biden has talked the talk, the IRA 2022 delivers serious firepower – US\$369bn + US\$400bn DoE Loan Program

The US power interconnection queue has more generation capacity than is currently online

US interconnection queue, gigawatts



Interconnection queue, by resource



The US has 1,450 GW of firmed wind & solar proposals in development (US\$2 trillion). The US installed 5GW of batteries in 2022.

### DOE launches \$6B program to slash emissions from heavy industry

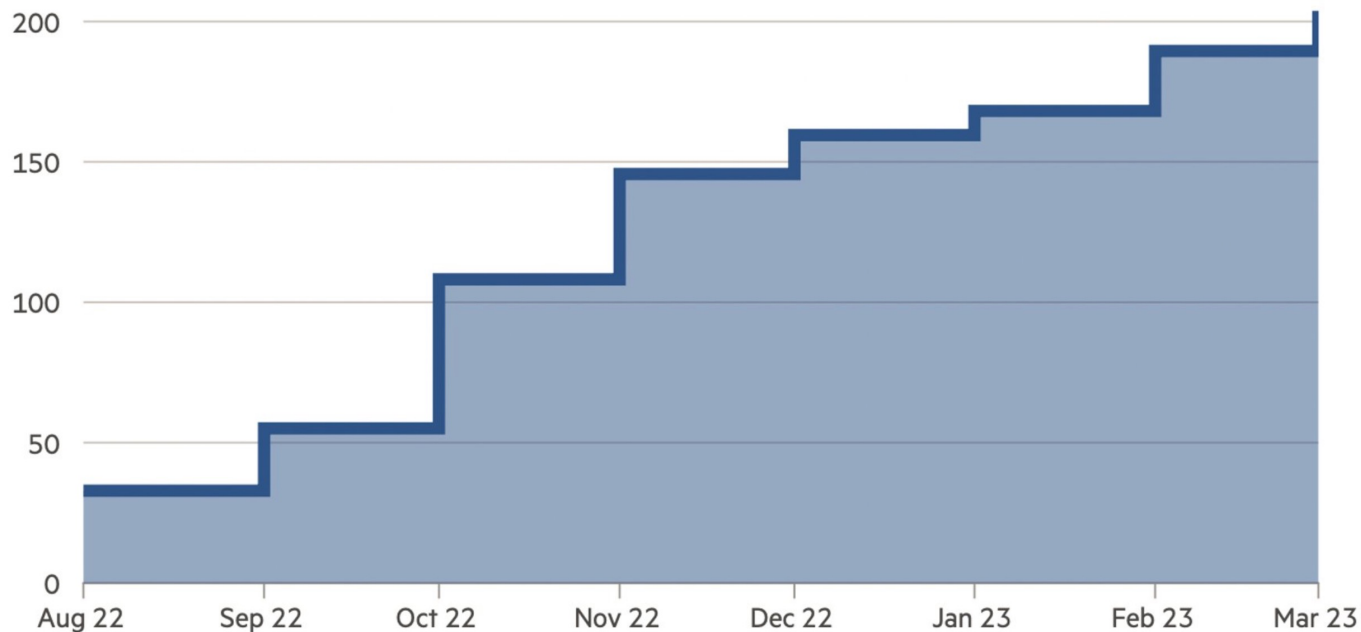
The Biden administration announced it will help fund projects to clean up the production of steel, cement, aluminum and other hard-to-decarbonize sectors.

## 2. US Inflation Reduction Act 2022

There is a resurgence in US manufacturing post the IRA

Clean tech and semiconductor investments top \$200bn since passage of IRA and Chips Act

Cumulative total of all announced projects of at least \$100mn since August 2022, by month (\$bn)



FINANCIAL TIMES

Source: FT research, fDi Markets, Rystad Energy, and Semiconductor Industry Association

## 2. EU Net Zero Industry Act 2023



Press release | 16 March 2023 | Brussels

### Net-Zero Industry Act: Making the EU the home of clean technologies manufacturing and green jobs

The aim that the EU's overall domestic share of strategic net-zero technologies manufacturing capacity is >40% of EU deployment needs by 2030.

Today, the Commission proposed the [Net-Zero Industry Act](#) to scale up manufacturing of clean technologies in the EU and make sure the Union is well-equipped for the clean-energy transition. This initiative was announced by President **von der Leyen** as a part of the [Green Deal Industrial Plan](#).

The Act will strengthen the resilience and competitiveness of net-zero technologies manufacturing in the EU, and make our energy system more secure and sustainable. It will create better conditions to set up net-zero projects in Europe and attract investments, with the aim that the Union's overall strategic net-zero technologies manufacturing capacity approaches or reaches at least 40% of the Union's deployment needs by 2030. This will accelerate the progress towards the EU's 2030 climate and energy targets and the transition to climate neutrality, while boosting the competitiveness of EU industry, creating quality jobs, and supporting the EU's efforts to become energy independent.

## 2. India's Solar Manufacturing PLI

### India launches second phase of solar production incentive scheme

Solar Energy Corp. of India (SECI) has started accepting applications from solar manufacturers under the second phase of the production-linked incentive (PLI) scheme, with an outlay of about \$2.4 billion.

NOVEMBER 22, 2022 **UMA GUPTA**

BALANCE OF SYSTEMS

INVERTERS

MARKETS

MODULES & UPSTREAM MANUFACTURING

INDIA

MNRE secretary Indu Shekhar Chaturvedi said 21 Sept'2022 that the PLI would add 74 GW of solar module manufacturing capacity, an investment of Rs 94,000 crore.

Source: PV Magazine's Uma Gupta 22 November 2022  
<https://www.pv-magazine.com/2022/11/22/india-launches-second-phase-of-incentive-scheme-for-solar-manufacturing/>

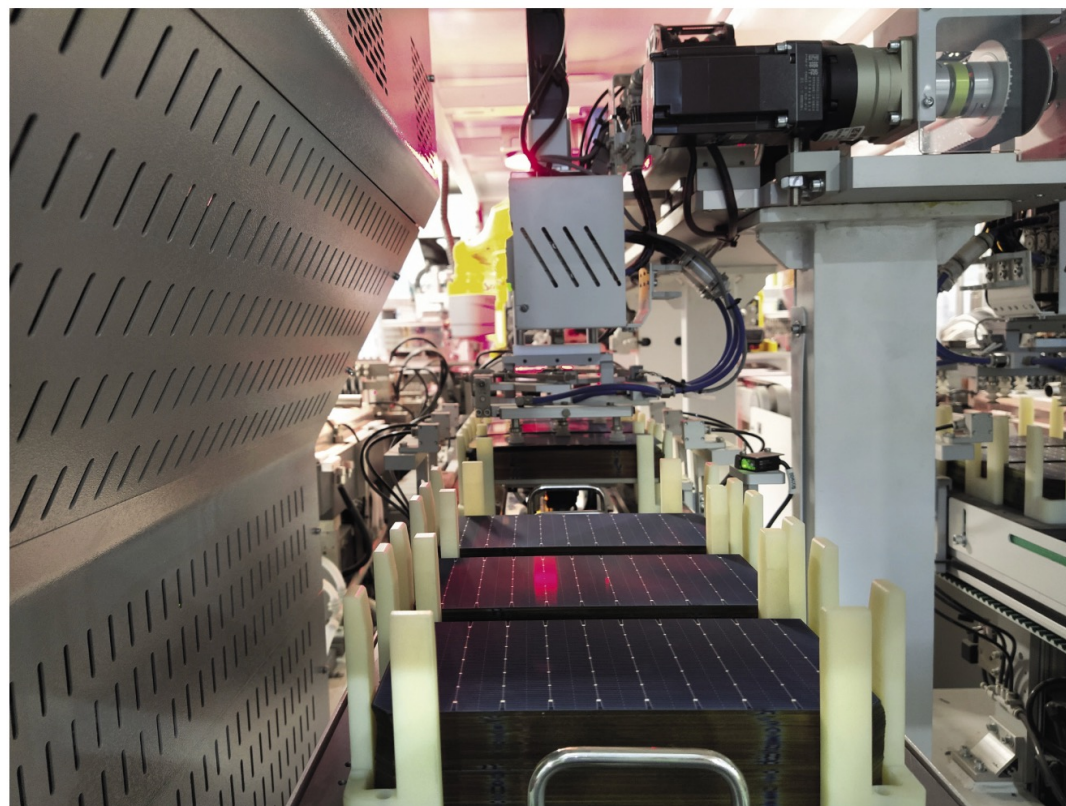
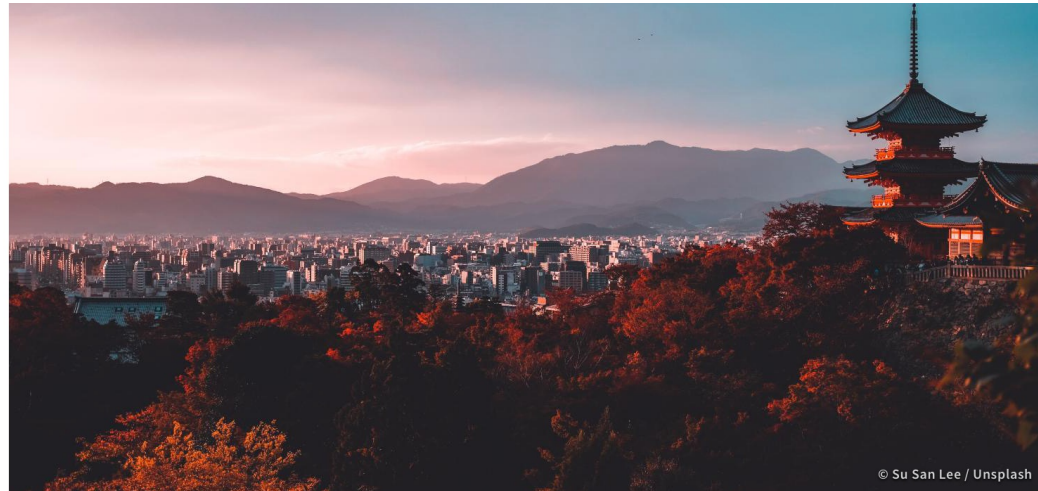


Image: Adani Solar

## 2. Japan's GX Roadmap

### Japan's Cabinet approves policy roadmap including plans for national ETS

METI's "Green Transformation" (GX) ten-year roadmap with ¥20 trillion in government support includes a 46% reduction in carbon emissions by 2030, a national ETS phased in from 2026, and "zero-emission thermal power" to decarbonise electricity by 2035.



On 10 February 2023, Japan's Cabinet approved the [Basic Plan](#) for the "GX: Green Transformation Policy", designed to help Japan reach its climate targets. Earlier in 2022, the Ministry of Environment, Trade, and Industry (METI) released the draft Basic Plan for public consultation, before compiling the final version towards the end of the year. The proposal comes at a time when Japan is facing an energy crisis, with energy in short supply and sharp increases in prices. To address these energy security challenges, Japan aims to continue moving towards "growth-oriented" carbon pricing.

The newly approved Basic Plan is a ten-year roadmap of Japan's decarbonization strategy. It outlines several carbon pricing instruments that will work in tandem to help Japan reach its NDC targets of a 46% reduction in greenhouse gases by 2030 and climate neutrality by 2050. These include the Green Transformation (GX) League (a voluntary baseline-and-credit system), a more traditional emissions trading system (ETS) later down the line, and a carbon levy.

Source: International Carbon Action Partnership 22 Feb 2023

<https://icapcarbonaction.com/en/news/japan-s-cabinet-approves-policy-roadmap-including-plans-national-ets> & J-REI 28 Feb 2023

<https://www.renewable-ei.org/en/activities/reports/20230228.php>



## 2. Canada

# The Canadian Critical Minerals Strategy

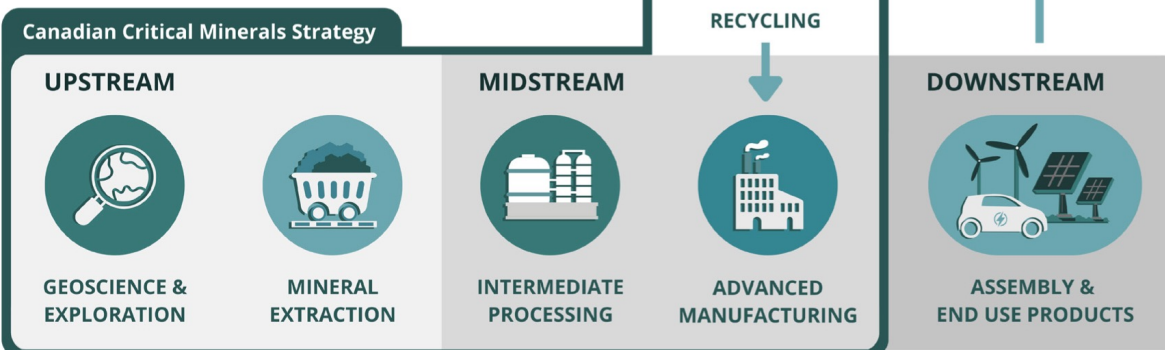
**FROM EXPLORATION TO RECYCLING:**  
Powering the Green and Digital Economy for  
Canada and the World

The Canadian Government has announced a sizeable **C\$3.8bn in funding to back the country's new critical minerals strategy in a bid to make Canada a global leader in producing electric vehicle (EV) batteries.**

Revealed by Canada's Prime Minister, Justin Trudeau, the new **58-page critical minerals strategy** details plans to significantly expedite the country's position in the **EV battery** supply chain globally. The document focuses on a range of critical minerals, including lithium, that will be essential for developing technologies for a greener future and how significant funding will be allocated to grow the industry, accelerating production and providing lucrative job opportunities.

Canada

Critical Minerals are the  
Building Blocks for the Green  
and Digital Economy



Source: Canadian Government Dec 2022,

<https://www.canada.ca/en/campaign/critical-minerals-in-canada/canadian-critical-minerals-strategy.html>

## 2. Korea's Refocus on the US IRA

### Battery Makers Plow \$31 Billion Into Remaking Korean Steel Hub

*The city of Pohang built up a world class steel industry over decades. Now it's turning to EV batteries.*



The sun sets over the Posco steel mill in Pohang, South Korea, on July 17, 2018. The city is increasingly seen as the country's new capital for the electric vehicle battery industry.

A South Korean city home to one of the world's biggest steelmakers is betting its manufacturing expertise, billions of dollars in investments and government incentives can help it dominate a 21st century industry: electric vehicle batteries.

Companies in the south-eastern hub of Pohang — famous for **Posco Holdings Inc.** steel mills and one of the country's elite universities — are aggressively building out EV battery campuses as automakers hurry to find reliable suppliers outside China. Three South Korean giants in the global battery market — LG Energy Solution Ltd., Samsung SDI Co. and SK On Co. — have promised 40 trillion won (\$31 billion) in domestic investments with their local suppliers.

President Yoon Suk Yeol said 'the government and companies including Samsung Electronics Co. will pour US\$422bin into areas such as chips and EV in the nation's most aggressive effort yet to win a heated global race for tech supremacy'

Source: Bloomberg's Heejin Kim 16 March 2023

<https://www.bloomberg.com/news/articles/2023-03-15/battery-makers-plow-31-billion-into-remaking-korean-steel-hub>

# 3. Australian Budget

The Australian Government budget position has improved, dramatically

## Underlying cash balance

Actual and forecasts

— Actual — October budget — Chris Richardson

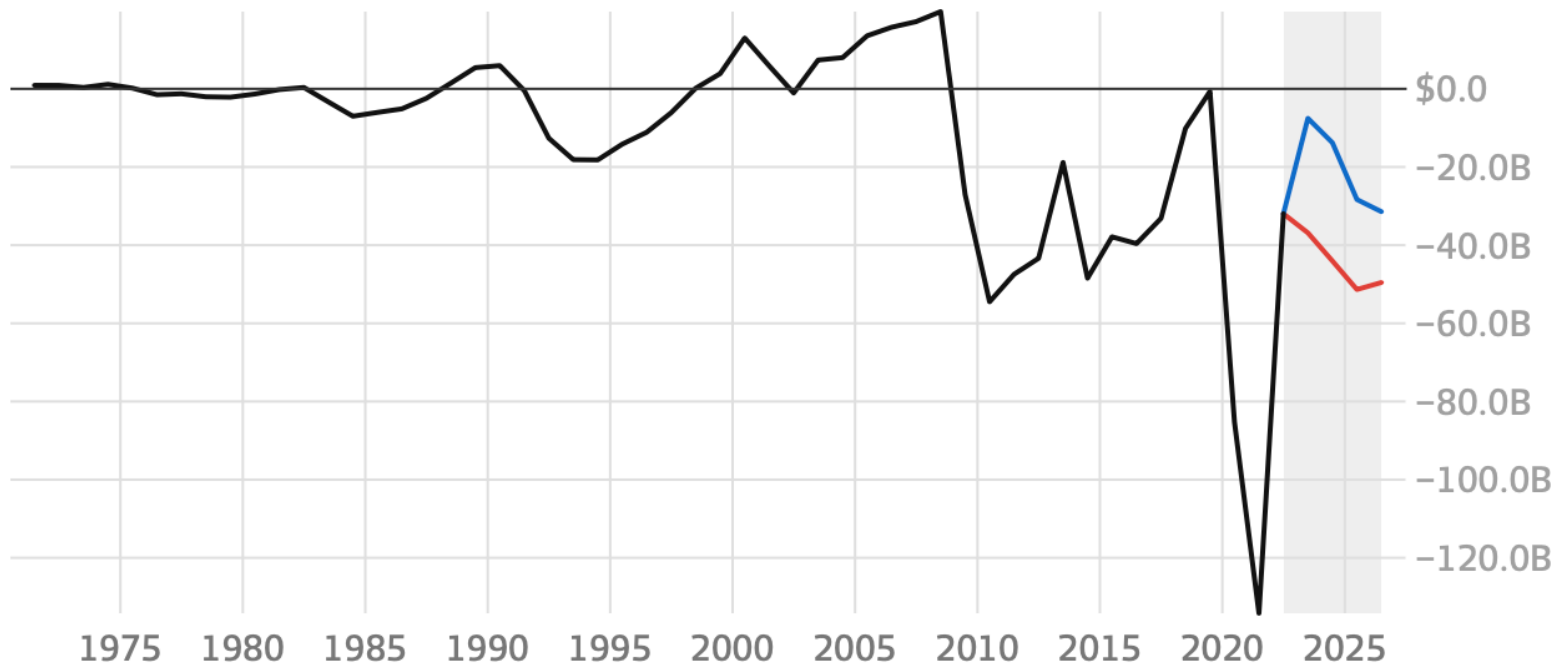


Chart: Michael Read • Source: Chris Richardson; Department of Finance

Source: "Sunshot in 2023" by Accenture BCA/ACTU/WWF/ACF report, March 2023

<https://www.afr.com/policy/economy/budget-surplus-possible-after-101b-commodities-fuelled-turnaround-20230501-p5d4i9>

### 3. Australian Budget

New initiatives already announced in 2022/23

- \$20bn Rewiring the Nation => CEFC
- \$15 billion National Reconstruction Fund : \$3bn renewables and low-emissions technologies, \$1bn mineral resources value-add
- \$1.9 billion Powering the Regions Fund
- **ARENA:** \$188m community batteries fund, \$25m Steel R&D fund, \$25m hydrogen R&D fund, \$146m Driving the Nation Fund, \$3m hot water control load demand mgmt, \$65m for Vast Solar CSP, \$50m HyGATE (GH2, green methanol), \$41m advanced solar R&D, \$176m for 8 battery projects, \$83m for First Nations Community Microgrids.
- \$2bn critical minerals funding by EFA
- \$525m Hydrogen Hubs funding
- \$100m Australian Made Battery plan for Queensland
- \$314m Small business Electrification ([\\$20k per SME](#))

CCF calls for \$100bn of public funding (Future fund, NAIF, EFA, ARENA, CEFC) to crowd-in \$200-300bn of private capital.

# 3. Australian Budget

A Federal LNG PRRT revamp – long overdue

## Chalmers preps tax increase on big gas



**John Kehoe**  
*Economics editor*

Apr 17, 2023 – 3.22pm

Jim Chalmers is close to pulling the trigger on a tax rise on big gas producer profits potentially worth billions of dollars extra to the federal government, after the Treasurer expressed concern that the petroleum resource rent tax is failing to deliver as much revenue as Labor and the community expects.

Treasury in the past few days delivered Dr Chalmers a report recommending an overhaul of the \$2 billion-a-year PRRT that applies to oil and gas projects in offshore federal waters.

Dr Chalmers said the tax rules for the 40 per cent PRRT were not “up to scratch”, signalling the government wanted to raise more revenue from soaring energy profits underpinned by the war between energy-rich Russia and Ukraine.



The Federal Government is seeking funding to pay for \$3bn of cost of living lower income household bill support announced with the domestic coal and gas price caps.

The PRRT will generate just \$26bn in 2022/23 and an average of \$2bn pa thereafter.

# 3. Australian Budget

## Multinational Tax Avoidance Review

5 August 2022

### Public consultation begins on Multinational Tax Integrity and Transparency

Joint media release with

**The Hon Stephen Jones MP**  
**Assistant Treasurer**  
**Minister for Financial Services**

**The Hon Dr Andrew Leigh**  
**Assistant Minister for Competition, Charities and Treasury**

The Albanese Government has released a discussion paper for public consultation on our election commitment to ensure that multinationals pay their fair share.

Multinational corporations making a profit in Australia should pay their fair share of tax in Australia.

Our multinational tax package will close tax loopholes exploited by multinationals and improve tax transparency.

This will benefit Australians by funding vital services like Medicare, aged care and childcare; helping to service the trillion dollars of debt racked up by the former government; and levelling the playing field for Australian businesses.

The discussion paper addresses our commitments to strengthen the interest limitation rules for multinationals; deny deductions for payments relating to intangibles and royalties that lead to insufficient tax being paid; and enhance multinationals' disclosure of tax information, to ensure the public is better informed of multinationals' tax arrangements.



The Hon Dr Jim Chalmers  
MP  
Treasurer

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A long overdue reform is needed vs MNC operating in Australia (Glencore, BP, Shell, Exxon, Chevron) using Australian public resources but paying zero corporate tax here.

# 3. Australian Budget

Diesel Fuel Subsidies to Major Mines \$4-5bn pa

## Audit Report No. 20 1995-96

### Summary

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## Australian Customs Service

### DIESEL FUEL REBATE SCHEME

### Efficiency Audit

A 30 year overdue [reform](#) is needed to cap the diesel fuel rebate at say \$50m pa per group to halve the \$8-9bn pa subsidy for imported, high emissions diesel, counter productive for the adoption of EVs.

#### The Audit

The objective of the audit was to examine the efficiency and administrative effectiveness of the scheme in light of rapidly increasing expenditure and a history of administrative difficulties and deficiencies.

The audit revealed that there is scope for significant improvements in the efficiency, administrative effectiveness, accountability and equitable delivery of the scheme. The lack of clear objectives for the scheme, combined with its prospective nature, continues to make its administration by Customs extremely difficult. However, the ANAO is concerned that significant deficiencies identified in its May 1991 report on the scheme have not been remedied.

Overall, the audit concluded that the scheme has not been effectively managed and that there is scope to reduce significantly the cost of its administration. The ANAO considers that Customs needs to reassess its approach to delivering the scheme, adopt best practices

# 4. Australia Will be a Critical Minerals Superpower

Supply chain security, cheap RE and resource ownership means Australia should be leveraging our new competitive advantages to lead the global energy transition



Director of Communications at  
CEF: Annemarie Jonson

## A Critical Minerals Value-Adding Superpower

**Mapping Australia's 'once in a century' opportunity to lead the world in new economy minerals mining and renewables-powered onshore refining and manufacturing pre-export**

**1 MARCH 2023**

Shifting the narrative from one of fear of the cost, to excitement of the massive opportunity ahead!

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**Tim Buckley, Founder and Director, CEF**  
**Matt Pollard, EV Supply Chain Analyst, CEF**

*with a Foreword by Dr Alan Finkel*