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Feedback on the second emissions reduction plan (2026-2030) discussion document

1. Thank you for the opportunity to share the New Zealand metals sector's concerns, priorities and aspirations in helping shape the direction of policy needed to enable a thriving, climate-resilient and low emissions Aotearoa New Zealand.

About Metals NZ

2. Metals NZ was established in 2011 to advocate for the New Zealand metals-related industry. It is committed to working with partners to deliver sustainable and cost effective products for use in residential, commercial and infrastructure build projects and supporting the sector's transition to a low emissions and circular economy future. Metals NZ represents a diverse range of manufacturers, distributors and recyclers who combined employ c. 25,000 people across New Zealand. The sector contributes c. \$3.3 billion annually to gross domestic product.

Government must ensure that New Zealand doesn't lose critical industries offshore

3. In pursuing the path to net zero, the Government must ensure that New Zealand doesn't lose critical industries offshore and, in doing so, further expose the economy to potential supply chain risks as was the case during New Zealand's response to Covid 19.

Focus on key areas of sector insight

4. Metals NZ shares the Government's objective of reducing carbon emissions in the building and construction sector. In doing so, we need to move away from calculations focused only on embodied carbon and instead need to consider lifetime carbon emissions. Metals NZ supports policy aimed at aligning New Zealand's manufacturing sector with lower emissions and circular economy principles. It is commonly accepted that reducing construction waste will improve economic as well as environmental performance. Metals NZ's submission does not comment on all areas of the discussion document but rather focuses on three areas of insight:

Chapter 4 Strengthening the New Zealand Emissions Trading Scheme;
Chapter 8 Forestry and wood processing;
Chapter 10 Waste.

Chapter 3 Strengthening the New Zealand Emissions Trading Scheme

3.2 What are the potential risks of using the NZ ETS as a key tool to reduce emissions?

5. The current structure of the ETS will likely result in extensive exotic afforestation, which could result in the unintended consequence of allowing gross emissions to continue largely unabated. The ETS should be amended to strengthen the incentive for gross emissions reductions and manage the amount of exotic forest planting it drives.
6. It is worth highlighting that increased emissions prices are already driving an increase in exotic forest planting. Over 60,000 ha of new exotic planting was intended for 2022. This is well above the 2022-2030 average of 32,000 ha per year projected by the Government when setting earlier emissions budgets.

Chapter 8 Forestry and wood processing

8.3 How large should the role of wood in the built environment play in New Zealand's climate response?

Metals NZ is deeply concerned

7. Metals NZ is deeply concerned with the following statement in the discussion document: *Boosting wood processing will result in more long-lived wood products that can store carbon during their lifetime. ...There are significant opportunities for growth in products such as modern engineered timber in construction, which could replace emissions-intensive materials such as steel and concrete, while also storing carbon.*¹

Extensive investment by the New Zealand metals industry in decarbonising their products and processes

8. The above statement belies the fact that extensive investment has been undertaken by the New Zealand steel and concrete industries in decarbonising their products and processes.
9. New Zealand Steel announced in May 2023 that it will partner with the Government to build a NZD \$300 million Electric Arc Furnace (EAF) at its steelworks at Glenbrook as part of the country's largest-ever emissions reduction project. The deal is being part funded with up to \$140 million from the Government and the remaining \$160 million from New Zealand Steel.
10. This significant investment will reduce Glenbrook's carbon footprint by at least 800,000 tonnes from day one – the same as taking approximately 300,000 cars off the road permanently. That represents a reduction of over 45 percent in New Zealand Steel's emissions – or a total of 1 percent of New Zealand's total annual emissions.
11. Steel is infinitely recyclable and the EAF will allow scrap steel to be melted and reused. For example, vehicles at end-of-life will no longer be shipped overseas but will become

¹ Refer page 80 of the discussion document

the raw material for other products – for likely reuse in the building and construction sector.

12. Fletcher Steel has access to low emissions steel and is currently considering market opportunities in New Zealand.
13. Phoenix Recyclers is mitigating climate change by recovering c. 100,000 MT of various metals which are infinitely recyclable -diverting them from landfill, reducing deforestation and mining of virgin resources.
14. New Zealand Steel, in partnership with MBIE and Victoria University of Wellington's *Robinson Research Institute*, is evaluating a process that utilises hydrogen -instead of coal- in decarbonising primary steel making in New Zealand. The hydrogen reacts with iron ore to form only water vapour, and hence the process has zero CO₂ emissions. Hydrogen can be generated from the electrolysis of water using largely renewable sources of energy i.e. wind, solar, geothermal and hydro.
15. The automatic formation of a passive layer on the surface of stainless steel means that -over the long life that is achievable for stainless steel components -there is no need for periodic maintenance such as reapplying coatings or protection systems. Specific requirements would be to ensure regular wash down (if not exposed to rain etc), selection of the correct grade (to avoid corrosion) and good design (such as avoiding crevices) in line with NZSSDA Code of Practice. Like carbon steel, stainless steel is fully recyclable at end of life, with "new" stainless steel made from scrap/recycled stainless capable of achieving very low carbon emissions – down to 0.5MT CO₂ per MT stainless steel.
16. We must not lose sight of the fact that the selection decision between carbon steel/ stainless steel and any elimination/replacement material is more than just carbon: design, cost and durability are also key decision-making factors. Higher durability materials reduce the need for repair and replacement, which can reduce the lifetime carbon impact of buildings.

Important that decisions regarding the use of building materials are driven by engineers, designers and specifiers

17. Timber has a place alongside steel and concrete in the New Zealand building and construction sector. However, it is important that decisions regarding the use of building materials are driven by engineers, designers and specifiers on a project-by-project basis.
18. Considering timber as a carbon-sequestering material has long been a point of contention among industry experts and policymakers. There remains considerable academic debate around the effect on emissions from varying forestry and harvesting practices and the end-of-life considerations of the material.
19. In order to fully understand the impact of timber materials, environmental assessments must first account for variation in forest management and harvesting practices as differences in these practices produce great disparities in the amount of carbon sequestered.

20. As demand grows for wood products, it will be crucial to ensure this demand is met with sustainable forestry management practices. Otherwise, the broader use of timber as a building product could result in higher carbon emissions and less ecological diversity.

Chapter 10. Waste

10.3 *What is the main action the Government could take to support emissions reductions from waste (in households and businesses or across the waste sector)?*

21. Our recycling and waste recovery needs to be addressed in moving New Zealand toward a low-emissions circular economy approach.

22. Currently, New Zealand's economy predominantly uses resources in a manner consistent with the linear 'extract-make-use-dispose' model. In contrast, a circular economy maximises the circularity of resources and energy within production systems.

Government needs to formally commit to circular economy strategy development and implementation

23. Working in partnership with business and iwi, the Government needs to formally commit to circular economy strategy development and implementation. This will require the establishment of data and tools to reduce both production-based and consumption-based emissions. Metals NZ members are well-advanced in the use of this type of data and would be happy to share their insights and findings with officials.

24. Recycling remains a necessary process as it enables the circulation of resources and exists as a tool to prevent waste. The important role of metals recycling from commercial construction and electronic waste is an example of this.

85 percent of New Zealand's building and construction steel waste is recycled or repurposed

25. In research done for HERA, approximately 85 percent of New Zealand's building and construction steel waste is recycled or repurposed². This recycling is less carbon-intensive than newly produced steel, with around 1000 kilograms of avoided emissions per tonne of steel recycled. Aluminium can be recycled indefinitely as reprocessing does not damage its structure. Increasing recycling rates would further lower emissions.

26. Zinc is the fourth most used metal in the world and is an essential resource in renewable energy, vehicles and infrastructure. Its main uses are protecting steel and manufacturing bronze and brass. Recycling zinc is critical for preserving this resource for future generations. **Unlike most recycled metals, recycled zinc has a larger CO₂ footprint than if it was mined. Christchurch-based Zincovery is partnering with AW Fraser, Callaghan Innovation and the University of Canterbury in building an alternative to the current carbon intensive zinc recycling process.** It aims to create the world's first waste-free galvanising industry, further highlighting the metals sector's bold sustainability aspirations.

² <https://www.hera.org.nz/sustainability/steel-recycling/>

27. Many technologies important in the transition to a more circular economy (including wind turbines, solar panels and batteries) require metal inputs. New Zealand is one of the world's highest per capita users of stainless steel and it remains important to our economy and recycling journey.
28. Emissions reduction can be achieved throughout a product's life cycle, including its design, production, distribution, use and end of life reclamation and reuse.

Repurposing buildings is a cost-effective tool in helping reduce building and construction emissions

29. Metals NZ supports the adaptive reuse of existing commercial and public buildings. Instead of taking a 'knock-it-down and build-a-new-one approach', repurposing buildings is a cost-effective tool in helping reduce building and construction emissions.
30. The beauty of steel is that it is readily adaptable. Reusing steel means not having to add additional emissions, as they have already been accounted for the original form. The University of Auckland has a good example of a New Zealand Green Building Council six-star building that repurposes an old steel frame to create the new build³. This highest rated Greenstar project was opened in 2024. Adaptive reuse of the steel structure was key to achieving the low embodied carbon emissions and demonstrates steel's key role in buildings.⁴
31. The key to repurposing buildings is to identify new uses for old structures. Many older buildings have sufficient height and spacing of columns and beams to allow easy repurposing. Flexibility is pivotal and reusing the steel means less energy, less carbon and reduced projects costs. A real benefit of steel is the ease with which it can be altered – steel is readily adapted by welding, cutting or shaping.

Develop an incentive for homeowners to re-roof and insulate at the same time

32. Thousands of houses are re-roofed each year in New Zealand. During a roof replacement, roofing contractors usually strip the roofing down to the decking material. If the roof deck is in good condition, it is kept as it is. Since the roof insulation is typically installed on the underside of the roof decking, homeowners have the opportunity to have roof insulation installed or replaced. If a ceiling or roof has no insulation, you can lose c. 40% of your cooling and heating energy. One of the simplest and most cost-effective ways to boost thermal performance is to increase roof insulation. However, when many homeowners re-roof, financial constraints can sometimes mean that only the new roof is budgeted for⁵.

³ <https://www.auckland.ac.nz/en/news/2021/08/12/uoa-building-design-receives-highest-ever-green-star-rating.html>

⁴ <https://nzgbc.org.nz/case-studies/building-201-reuse-of-university-of-auckland-building-slashes-carbon>

⁵ Since 1 July 2019, ceiling and underfloor insulation has been compulsory in all rental homes where it is reasonably practicable to install.

33. In attempting to provide a potential solution, MBIE could consider working with EECA to partner with the New Zealand Metal Roofing Manufacturers' Association⁶ to develop an incentive for homeowners to re-roof and insulate at the same time. This provides a double benefit of emissions reduction and, from 2026, the 'waste' steel from the roof can be recycled into new steel (for the next roof?) using New Zealand Steel's EAF.

Following Australia's transitioning path to a circular economy

34. The Government should consider providing leadership for the building and construction sector in following Australia's transitioning path to a circular economy. In November 2022, Australia's Minister for the Environment Tanya Plibersek announced the establishment of a Ministerial Advisory Group on the Circular Economy.

35. This expert group has been established to guide Australia as it transitions to a circular economy by 2030⁷. The group will look at how products are designed, manufactured and used across all sectors of the economy. It will identify meaningful and direct changes the government and industry can make to drive the transition to a circular economy.⁸

36. If a product can't be reduced, reused, repaired, rebuilt, refurbished, recycled or composted, then it should be restricted, redesigned, or removed from production.

37. With the right vision and leadership, New Zealand can lead the way with how valuable resources are created, constructed, recycled and re-used.

Kind regards



Rick Osborne
Chief Executive

⁶ https://www.metalroofing.org.nz/about_us

⁷ <https://minister.dcceew.gov.au/plibersek/media-releases/expert-group-guiding-australia-circular-economy>

⁸ <https://wastemanagementreview.com.au/first-meeting-of-circular-economy-advisory-group/>