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Steven Bailey
Inquiry Director
Productivity Commission

Via Email

Dear Steven

RE: Low Emissions Economy

Metals New Zealand welcomes the Productivity Commission's Issues paper and is pleased to provide the following submission. We also thank you for the opportunity to provide a late submission.

1. Introduction

Metals Sector role in the New Zealand economy

New Zealand's Metals sector currently contributes over 7% of New Zealand's GDP and direct metals based product manufacturing employs over 26,000 people.

Metals are essential components of New Zealand's building and construction sector, evidenced in the significant contribution made to the rebuild of Canterbury.

World leading best practice in New Zealand's metals sector

Many metals businesses provide significant employment and economic activity in New Zealand's regions. Providing high value jobs that demonstrate best practice in their field. For example:

- New Zealand Steel's co-generation plant on the mill site at Waiuku in South Auckland provides around 60% of their total energy from cogeneration and recycling heat and gases.

- NZAS aluminium smelter at Tiwai Point has one of the lightest carbon footprints per tonne in the world. With less than 4 tonnes of CO₂ per tonne of aluminium compared to a global industry average of over 11.5 tonnes of CO₂ per tonne (cradle to gate assessment).
- McKechnie Aluminium, who produces recycled aluminium in New Plymouth, recently received CEMARS product certification with a carbon footprint of 1.21 kg of CO₂ per kg of aluminium (based on a cradle to gate assessment).

The Productivity Commission needs to develop a framework of incentives and regulations that continue to support these world-leading manufacturers and their essential metal products on the transition to a low emissions economy.

A failure to support these innovative producers in New Zealand threatens their future. And, could potentially result in New Zealand being responsible for increased global carbon emissions if local manufactures were to close and imported, higher carbon equivalent products were to displace them.

Transition to a low- emissions economy needs robust foundations

The Commission acknowledges that *an effective transition to a low-emissions economy will mean that New Zealand will look very different in 2050.*

Metals New Zealand acknowledges that new technologies and businesses will be part of the transition to a low emission economy. However we would encourage the Commission not to exclude New Zealand manufacturing from this picture as multi story construction will continue to rely upon metals to deliver resilient structures into the foreseeable future.

Nationwide, metals manufacturing has enabled new, innovative processes and business (which effectively lower emissions) to be nurtured and thrive. For example, Lanzatech's pioneering technology which converts steel making emissions into ethanol - in the process reducing steel emissions from steel making.

Fairness across all sectors

The commission highlights that *the challenge New Zealand faces in mitigating its emissions differs from most other developed countries, due to its unusual emissions profile.* However, for New Zealand to achieve its emission reduction targets and fulfill our global responsibility, all sectors of the economy need to be addressing their greenhouse gas emissions.

The New Zealand government and the Productivity Commission can't be choosing winners and losers.

Stable policy settings to deliver certainty through the transition

The Commission acknowledges that future pathways to a low-emission economy are unclear. Metals New Zealand encourages the Commission to develop a process that has firm commitment from all political parties to ensure that New Zealand's policy framework supporting the transition is stable and clear.

Metals businesses generally require significant capital investment to maintain their competitive position. The Commission's role is to provide a clear direction and stable policy pathway to provide certainty for them.

2. Response to Questions

Q1

How can the Commission add the most value in this inquiry?

The Commission can add the most value to this inquiry by:

- developing a pathway for the transition to a low carbon economy that has binding commitment from all political parties;
- providing clear direction and a stable policy pathway that enhances productivity and well-being to provide certainty for all New Zealand businesses;
- developing a framework of incentives and regulations that includes all sectors of the economy and all emitters of GHG's in a fair and balanced manner, and;
- supporting New Zealand's world-leading manufacturers (particularly essential metal products), on the transition to a low emissions economy.

Q2

Chapter 3 of this issues paper mostly looks at ways to reduce emissions directly at their source. What other approaches would help identify opportunities to effectively reduce emission

Consider New Zealand's position in the global context.

In seeking to reduce emissions at source where energy consumed by manufacturers is largely from renewable sources, the Commission needs to consider the global context where successful New Zealand based manufacturers are currently at leading edge of low emission manufacturing. Growing local manufacture and exports will ensure New Zealand is playing its part to reduce global emissions.

Q10

In addition to encouraging the use of electric vehicles, what are the main opportunities and barriers to reducing emission in transport

Metals New Zealand encourages the Commission not to rely solely on electric vehicles. It may create unintended consequences with significant additional loads to electricity networks and with reuse / disposal of batteries at end of life. We'd encourage the Commission to explore:

- New Zealand based progress with biogas and biofuels as key components in the transition to low / no emission transport. Hydrogen technology should also be considered.
- The development of alternative forms of public transport (eg Skycabs) powered by renewable energy.
- Cycling and walking which deliver multiple benefits

Q11

What are the main opportunities and barriers to reducing emissions from the use of fossil fuels to generate energy in manufacturing?

Solar energy and other low emission technologies such as biofuels are technologically ready to replace fossil fuels. However the challenge of cost effectiveness with existing fossil energy remains, as full externalities of fossil fuels are currently not fully costed in its pricing.

Significant untapped opportunities do exist in reducing energy needs through the transfer of waste heat from manufacturing into useful electrical energy via Organic Rankine Cycle (ORC) technology.

Q15

What are the main opportunities and barriers to reducing emissions in industrial processes (such as the production of steel, aluminium and cement) and in product use (such as the use of hydrofluorocarbons in refrigeration and air conditioning equipment)?

The Commission's issues paper acknowledges that emissions from industrial processes are intrinsic to the physical process involved in making steel. Currently there is no viable alternative. However, New Zealand Steel's co-generation plant on the mill site at Waiuku in South Auckland provides around 60% of their total energy from cogeneration and recycling heat and gases.

Q16

What policies and initiatives would best promote the design and use of buildings that produce low greenhouse gas emissions?

It is technically feasible to design, construct and operate buildings which are zero emission and resource positive - generating more energy and water than they consume.

The Building Act, in its purpose includes – *that buildings are designed, constructed and able to be used in ways that promote sustainable development.*

The Commission needs to direct MBIE to ensure the Building Code delivers on the Act and clearly signal to the Building & Construction sector what that pathway is.

The Green Star rating system introduced by NZGBC provides direction by evaluating the environmental design, efficiency and performance of our buildings based on the number of credits awarded for environmental merits over a range of areas, which consider the components, and materials used to deliver sustainable construction.

Q17

What are the main opportunities and barriers to reducing emissions in waste?

Historically the Metals sector have been committed to the recycling of metals material waste as it has significant commercial value. Emissions from the processing of recycled aluminium in New Zealand are exceptionally low by world standards, with New Zealand's sole recaster of aluminium having a low carbon footprint 1.21kg of CO₂ per kg of aluminium, (based on a cradle to gate assessment) owing to its reliance on renewable energy.

Q18

Policies to lower emissions from particular sources, technologies and processes can have interactions with emission sources in other parts of the economy. What are the most important interactions to consider for a transition to a low emission economy?

Metals New Zealand encourages the Commission to look beyond the local economy and consider New Zealand's role in the global context. Many New Zealand based manufacturers have global competitive advantage as their energy is largely from renewable sources. Some NZ based manufacturers are currently at the leading edge of low emission manufacturing. Growing local manufacture and exports must be a priority for the Commission to ensure New Zealand is playing its part to reduce global emissions.

Q22

What type of support for innovation and technology would be best to help New Zealand transition to a low-emissions ?

Support for innovation and uptake of new technology is critical for a successful transition to a low carbon economy. Metals New Zealand continues to advocate for a R & D tax credit scheme which is essential to support research and development in New Zealand. Similarly a policy of accelerated depreciation will facilitate a more rapid uptake of new technologies that will lift New Zealand's productivity and hasten transition to a low carbon economy.

Q25

In addition to "core" climate policies and institutions, what other changes to policy settings or institutional frameworks are required to effectively transition New Zealand to a low-emissions economy?

The Commission must deliver a process for the transition that has firm commitment from all political parties. This will ensure New Zealand's policy framework is stable over the next four decades and provide clarity for businesses to make long term decisions.

The Productivity Commission need to provide an equitable framework which ensures all sectors of our economy are addressing their green house gas emissions. And, develop a framework of

incentives and regulations that continue to support our world-leading manufacturers here in New Zealand on the transition to a low emissions economy.

A failure to support these innovative producers threatens their future. And, could potentially result in New Zealand being responsible for increased global carbon emissions if local manufactures were to close, and imported higher carbon equivalent products were to displace them.

3. Summary

The Productivity Commission needs to develop a framework of incentives and regulations that continue to support New Zealand's world-leading manufacturers of essential metal products on the transition to a low emissions economy.

A failure to do so threatens their future and potentially could result in New Zealand being responsible for increased global carbon emissions if local manufactures were to close, and imported higher carbon equivalent products were to displace them.

For New Zealand to achieve its emission reduction targets and fulfill our global responsibility, all sectors of the economy need to be addressing their green house gas emissions. The New Zealand government and the Productivity Commission can't be choosing winners and losers.

Metals New Zealand encourages the Commission to develop a process that has firm commitment from all political parties to ensure that New Zealand's policy framework supporting the transition is stable and clear.

4. Metals New Zealand

Metals New Zealand Incorporated was formed in 2011 to advance the interests of New Zealand's diverse metals industry. It provides advocacy and strategic leadership on issues that affect the entire metals industry. From its beginnings in the 1860s, when there were 28 foundries employing 855 people, the industry has now grown to employ over 26,000 people and produce over \$7 billion of product each year. In 2010 the industry exported metal commodities such as aluminium, iron and steel worth \$2.3 billion, or 5.5% of the country's total exports. Approximately 90% of steel and aluminium is recycled and reused.

www.metals.org.nz

HEAVY ENGINEERING RESEARCH ASSOCIATION

The New Zealand Heavy Engineering Research Association (HERA) was established in 1979 as a non-profit research organisation dedicated to serving the needs of the metals-based industries in New Zealand. Its membership consists of approximately 600 companies representing metals-based

fabrication and manufacturing companies, the associated design and consulting industry, related education providers, and the supporting material supply and services industry.

HERA is base funded through an industry generated R&D contribution in the form of a levy on heavy steel and welding consumables administered by the Heavy Engineering Research Levy (HERL) Act. HERA's current research is in the areas of steel construction, general heavy engineering industry development and welding fabrication innovation. HERA works with other research providers such as universities, independent research organisations and CRIs to deliver its programmes.

www.hera.org.nz

STEEL CONSTRUCTION NEW ZEALAND

Steel Construction New Zealand Inc. (SCNZ) aims to advance the interests of New Zealand's diverse steel construction industry by promoting the benefits of steel solutions in building and infrastructure projects. Members include manufacturers of structural steel and steel products, distributors, fabricators, designers, detailers, galvanisers, and paint and building supply companies. SCNZ provides its members with technical advice on the latest in steel design trends and standards, networking opportunities, and a representative voice with key industry and Government decision-makers.

www.scnz.org

CASTING TECHNOLOGY NEW ZEALAND

Casting Technology New Zealand (CTNZ) aims to be a major contributor to the success and prosperity of the metal casting industry. The organisation is an advocate for maintaining high industry standards and encourages members to participate in quality training programmes. It provides a network for technical and business activities among its membership at national and international levels. At a Government level, CTNZ keeps abreast of legislation relevant to the metal casting industry and, importantly, represents the industry's position on issues affecting the sector.

www.castingtechnologynz.org

GALVANIZING ASSOCIATION OF NEW ZEALAND

The Galvanizing Association of New Zealand (GANZ) represents the core of New Zealand's galvanising specialists. Its mission is to promote the environmental sustainability of its product and to maintain the highest standards of quality and service in support of New Zealand construction and engineering industries through its international affiliations.

www.galvanizing.org.nz

NEW ZEALAND METAL ROOFING MANUFACTURERS ASSOCIATION

The New Zealand Metal Roofing Manufacturers Association Inc. (NZMRM) represents companies that roll-form steel and other metals for roofing and cladding purposes. Commonly known as 'Rollformers', NZMRM has 30 member companies. Members are involved in producing a wide range of profiled product, both painted and unpainted. The Association is active in the development and promotion of industry standards, and in conducting research that promotes the use of metal roofing and cladding.

www.metalroofing.org.nz

NATIONAL ASSOCIATION OF STEEL-FRAMED HOUSING

Formed in New Zealand and Australia in 1982, the National Association of Steel-Framed Housing (NASH) is an advocate for all forms of low-rise steel-framed construction. NASH represents the interests of suppliers, practitioners and customers of steel-framing systems, and provides a representative voice for the sector at Government level.

www.nashnz.org.nz

NEW ZEALAND STAINLESS STEEL DEVELOPMENT ASSOCIATION

The New Zealand Stainless Steel Development Association (NZSSDA) was formed in 1998 to promote and develop the stainless steel market in New Zealand. Its members include engineers, architects, fabricators, merchants and end-users with an interest in the supply or application of stainless steels. NZSSDA supports and encourages technical excellence in the industry and provides specialised training courses on stainless steel for the New Zealand market.

www.nzssda.org.nz



A United Industry Voice



Stainless NZ
New Zealand Stainless Steel Development Association

