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Ministry of Business, Innovation and Employment
15 Stout Street
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Attention: gasfuelpolicy@mbie.govt.nz

NZ Steel Submission on the Proposals for a Regulatory Regime for Carbon Capture, Utilisation and Storage

1. NZ Steel welcomes the opportunity to provide a submission on a proposed regulatory regime for carbon capture utilization and storage (“CCUS”) in New Zealand.
2. For context, NZ Steel is a fully integrated steelmaker producing over 600,000 tonnes of steel each year. NZ Steel has begun work on a project to install an electric arc furnace (“EAF”) at Glenbrook – this is the largest single-site decarbonisation project in the history of New Zealand. The EAF project is on track for commissioning in 2026 and will remove at least 800,000 tonnes of carbon from the atmosphere every year. It will also see hundreds of thousands of tonnes of domestic scrap recycled here rather than being shipped overseas to be recycled. Together with Contact Energy’s 100MW Tesla grid scale battery at Glenbrook (FID approved), the EAF is an important step in our site transformation to a future hub of sustainable and complementary economic, environmental, and social enterprises built on local and international partnerships, which involves several other projects currently at concept stage.
3. NZ Steel supports a new regulatory regime for CCUS and agrees New Zealand industries should be able to access CCUS technology on a level playing field with other emissions reduction and removal tools to support a least cost transition towards net zero emissions. NZ Steel welcomes the Government’s proactive approach in this area, however, New Zealand is behind other jurisdictions (jurisdictions that our country competes with for overseas investment capital). A new CCUS regime must ensure environmental and cultural impacts are appropriately managed, but it must also suitably incentivise new capital investment into New Zealand. Smart regulatory implementation, at pace, is needed.
4. While several other market, environmental and economic factors would need to be considered, CCUS has the potential to play an important role in the next phases of the decarbonisation of NZ Steel’s steelmaking operations and broader site activities at Glenbrook in three different ways:
 - a. In parallel with delivering the EAF, NZ Steel is exploring options for phase two of its transition to lower carbon steel making. Phase two has good optionality, which is why the transition was designed this way. Options being explored involve natural gas and green hydrogen. Natural gas could be used to directly reduce our iron sand, however, there would still be a small volume of emissions from using natural gas this way. CCUS technology could potentially be applied to capture these emissions and either use or store them. A functional CCUS regulatory regime will better incentivise this type of investment.

- b. As an alternative, or in addition, to the two decarbonisation pathways outlined above, point source capture of NZ Steel's carbon emissions at Glenbrook is a theoretical possibility. NZ Steel still needs to undertake preliminary due diligence on this – capturing technology at industrial scale is expensive and complex. Again, a functional CCUS regime, whilst not being the panacea to investment certainty, will assist with such point source capture considerations. If investors can better monetise point source technology via obtaining proportionate carbon credits then these types of investments are more likely and may come about sooner.
 - c. NZ Steel is actively investigating ways in which its Glenbrook site in Auckland can become a focal point for world-class decarbonisation technology and green energy. Direct Air Capture (DAC) is one such market opportunity that is being actively investigated at Glenbrook – the captured carbon could be used for food uses, beverages and even demo-level sustainable aviation fuel. Again, a fit-for-purpose CCUS regulatory regime will enable this type of innovation and investment to occur faster and with more certainty.
5. Please see the Annexure to this submission which sets out NZ Steel's written responses to some of the questions in MBIE's paper.

Annexure 1 – Questions & Answers

	Question	NZ Steel comment
1	Do you agree that the government should establish an enabling regime for CCUS? Please provide any further information to support your answer.	NZ Steel supports the proposed creation of relevant regulations detailed in the document on the monitoring, verification and reporting regime for CCS activities.
2	Do you agree with our objectives for the enabling regime for CCUS? Please provide any further information to support your answer.	<p>NZ Steel agrees with the Intergovernmental Panel on Climate Change (IPCC) and IEA’s view that CCUS has an important role to play in the pathway to net zero.</p> <p>However, these objectives might be expanded to suggest that NZ should aim to be a global leader in these technologies given its commitments to environmental equity and its abundance of renewable resources. Many technology companies, including climate tech companies, find they must leave NZ to pursue larger markets. Yet because carbon removal is geography neutral, it also has the potential to be a “virtual export” for the country.</p> <p>NZ Steel notes (in passing) that the consultation paper focuses on natural gas emission injection and storage. Recognition is also required on the absorption technologies (whether that be linked to carbon storage or utilization). This will require closer scientific assessment.</p>
3	Should the ETS be modified to account for the emissions reductions achieved using CCS? If so, how do you think it should be modified?	NZ Steel supports the proposed option to allow participants to either subtract their emissions captured and stored from their ETS liability or alternatively receive an NZU for captured and sequestered carbon. This approach improves the likely adoption of CCS operations, ensuring all CCS activities are eligible and receive recognition.
6	In your opinion, which overseas standards for monitoring, verification and reporting of CCUS-related information should New Zealand adopt?	NZ Steel supports the proposed creation of relevant regulations on the monitoring, verification and reporting regime for CCS activities. The collection and reporting of relevant information, as it relates to the quantity of CO ₂ captured, stored and leaked, similar to regulations in Australia and the European Union is supported. Factors unique to NZ (such as its geothermal resource) will need customisation.

11	Do you consider there should a minimum threshold for monitoring requirements so that small-scale pilot CCS operators would not have to comply with them? If so, what should be the threshold?	Yes, there should be a minimum threshold. If NZ is to become a centre of decarbonisation technology then CCUS start-ups, pilot plants and demo plants must all be encouraged and incentivised through appropriate and agile regulation – whether that be less monitoring or (in the case of question 16) lower liability profiles.
16	Do you consider there should a minimum threshold for CCUS operators being held responsible for liability for CO2 storage sites so that small-scale pilot CCS operators would be exempt? If so, what should be the threshold?	Yes - see answer to question 11 above.
17	Should the government indemnify the operator of a storage site once it has closed? If so, what should be the minimum time before the government chooses to indemnify the operator against liabilities for the CO2 storage sites?	NZ Steel supports the proposal for the Government to indemnify CCS operators' site liability after 15 years. NZ Steel recommends operators should be given flexibility, with a pathway to apply for an indemnity early if it can be evidenced CO2 will be permanently contained. However, NZ Steel agrees operators should still be liable for monitoring and reporting for an extended period.
21	Are inconsistencies in existing legislation for consenting and permitting impacting investment?	To accelerate and incentivise investment capital in NZ, it would be preferable to avoid a lengthy and convoluted consenting processes to support quicker reduction in CO2. A National Environmental Standard could be drafted to standardise across all of NZ, setting out minimum consent conditions for e.g. engineering, monitoring, location, mitigation, closure and any other key controls for CC and storage industry. Alternatively, CCUS could be included in the current Fast-Track Approvals Bill as large facilities could be considered of national significance for NZ to meet international GHG reduction commitments.
22	Should the permit regime for CCUS operations be set out in bespoke legislation or be part of an existing regulatory regime (such as the RMA, EEZ Act, the CMA or the Climate Change Response Act 2002)? Please give reasons for your answer.	NZ Steel questions the need for a bespoke piece of legislation to recognise CCUS and recommend amending existing legislation to enable CCS. The Resource Management Act (RMA) provides a reasonable and workable regulatory framework for permitting CCS activities.

24	Should there be separate permitting regime for CCU activity if there is no intention to store the CO2?	No.
26	What potential markets for CO2 derived products do you see as most critical in New Zealand?	<p>NZ Steel considers the utilisation part of CCUS has not been given enough focus in MBIE’s paper. Encouraging carbon utilisation in NZ will be very important as there is substantial market demand for CO2. NZ currently imports CO2 for large users which is not ideal.</p> <p>CO2 is in high demand in the beverage sector. It is also in high demand in the food sector (especially for greenhouse applications (although the CO2 must be “food grade”). CO2 also has significant potential upside for domestic SAF production (both via DAC and point source capture).</p> <p>Carbon capture technology is inexorably linked to carbon utilisation and its growth. It may be that promoting the carbon utilisation market in NZ will allow carbon capture technology to evolve and innovate – to such a level that carbon storage becomes more commercially viable in the medium term (this technology pathway and interplay needs to be looked at further).</p>