BEFORE THE PANEL **FTAA-2506-1074**

IN THE MATTER	of an application for approvals ("Application") under s42 of the Fast-track Approvals Act 2024 ("FTAA")
AND	
IN THE MATTER	of the construction and operation of a structural steel manufacturing plant by Green Steel, being a project listed in Schedule 2 to the FTAA ("Project")

APPLICANT'S RESPONSE TO MINUTE 2 OF THE PANEL – FURTHER INFORMATION REQUEST #1

14 NOVEMBER 2025

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MAY IT PLEASE THE PANEL:

1. INTRODUCTION

1.1 This memorandum, filed on behalf of National Green Steel Limited ("Green Steel"), responds to Minute Two of the Panel requesting further information regarding the Project's regional or national benefits.

2. SUMMARY OF RESPONSES

2.1 In response to specific questions raised by the Panel in Minute 2, the applicant provides statements from:

a. Mr Vipan Garg, Director of Green Steel - addressing proposed technology, feedstock feasibility, product quality, market demand, economic impact, and employment outcomes;

b. Mr Andreas Heuser, Castalia - verifying the broader methodological, evidential and emissions-related assumptions raised in the Panel's Minute relating to Castalia's Economic Impact Analysis dated March 2025[1] ("Economic Report");

c. Mr James Carmichael, energy advisor to Green Steel - addressing electricity usage.

2.2 A summary of responses to the questions and the relevant legal considerations are set out below.

Paras [2] to [14] - Response to General Issues Raised in Minute 2

2.3 The Castalia Addendum addresses the Panel's questions about the basis for the key assumptions and information supporting the Economic Report. It confirms that the cost-benefit methodology is robust, excludes speculative terminal values, and uses internationally benchmarked data adjusted for New Zealand's low-emissions grid.

2.4 Mr Heuser responds to concerns about reliance on applicant-supplied inputs by clarifying sources, benchmarking methods, and the treatment of unquantified effects while Mr Garg outlines the business plan assumptions provided to Castalia. Where some environmental and social impacts have

[1] Attachment 11 to Application

not been monetised, Castalia explains that these have been treated as minor or positive.

2.5 Castalia also explains that returns to investors are a legitimate component of regional and/or national economic welfare when they reflect productive activity that expands a region's and/or New Zealand's output and income base - as is the case with the Green Steel Project. The possibility that ownership may change to a foreign owner is immaterial under accepted cost benefit analysis principles.

2.6 The Addendum reinforces that the Project delivers significant regional and national benefits within the meaning of the FTAA, specifically through projected profit, high-value employment, domestic steel production, reduced reliance on imports, and measurable global emissions reductions.

Para [16] - Commitment to the installation and use of EAF plant

2.7 The Minute seeks clarification as to the commitment to install and use the EAF plant.

2.8 The AEE and supporting technical assessments have been prepared on the basis that the plant will use Electric Arc Furnace technology ("EAF technology").[2] The use of EAF technology is reconfirmed in the statement by Mr Garg.

2.9 The proposed conditions of consent are also predicated on the basis that the proposal is undertaken in general accordance with the AEE and supporting documentation.

2.10 Accordingly, any implementation or use of any alternative technology would be outside the scope of the approval and require a variation.[3]

Para [17] - Comparative Emissions Performance and Global Technology Assumptions

2.11 The responses to paragraph [16] confirm that the Project will use EAF technology. EAF technology emits significantly less CO_2 than traditional blast furnace/basic oxygen furnace (BF/BOF) methods which use coal. Castalia cites international data showing BF/BOF emissions range from 1.8 to 3.0 t CO_2 per tonne of steel, while EAF emissions are around 0.5 t CO_2

[2] Refer section 4 of the AEE, eg. at paras 4.8, 4.11 4.12, 4.15, 4.28
[3] Per s127 RMA

per tonne. These figures are considered conservative in New Zealand given the renewable components of the electricity grid.

2.12 Castalia and Mr Garg both note that most imported steel originates from countries like China and India, where BF/BOF is dominant and unlikely to be displaced due to limited scrap availability. It is not feasible to speculate on future steel business models in those countries.

2.13 This information supports the assumption that the Project will reduce global emissions by substituting high-emissions virgin steel with low-emissions domestic production.

Para [18] – Counterfactual Emissions and Scrap Steel Use

2.14 Castalia clarifies that the Project replaces high-emissions virgin steel imports, not recycled steel, and that most imported steel is produced via BF/BOF methods. Even if exported scrap were recycled offshore, domestic EAF processing powered by New Zealand's predominantly renewable electricity grid would result in lower emissions overall.

Para [19] - Emissions Estimates and Electrification of the Equalising Furnace

2.15 The emissions estimates cited in the Economic Report of 0.5 tonnes of CO_2 per tonne of steel produced are based on internationally benchmarked data for EAF steelmaking, and are conservative in the New Zealand context. Mr Heuser explains that Castalia verified the assumptions used against OECD and World Steel Association sources, which report EAF emissions intensities ranging from 0.4 to 0.6 t CO_2/t steel. Given New Zealand's predominantly renewable electricity grid, the actual emissions intensity is likely to be at the lower end of this range. Castalia confirms that the estimate is also conservative as upstream emissions from freight and ore extraction were excluded.

2.16 Regarding emissions from LPG use in the equalising furnace, Castalia's Addendum acknowledges that these were not included in the base emissions estimate but provides a quantified scenario sourced from Lumen's Emissions Plan.[4] If LPG were used at a rate of 3,900 t CO_2e per annum (as modelled by Lumen), conservatively, the present value of those

[4] Attachment 29 of the Application

emissions at the NZU carbon price would be $[redacted] million, thus reducing the headline NPV by 0.[redacted]%.

2.17 The Lumen Emissions Plan confirms that electrification of the equalising furnace was assessed but found to be impractical.[5] The selected LPG-fired system was chosen for its ability to achieve precise temperature profiles critical to product quality. However, the plant design incorporates hot charging (direct rolling), which significantly reduces LPG consumption and associated emissions. This energy efficiency measure is included in the Best Practicable Option and will be implemented at commissioning. The Emissions Plan requires ongoing review of alternative fuel options.[6]

2.18 In summary, the emissions estimates are considered to be both robust and appropriately conservative.

Para [20] - GHG Emissions from Electricity Use

2.19 Mr Carmichael explains that New Zealand's electricity generation is predominantly renewable, though subject to climatic variability. In 2024, renewables comprised 85.5% of total generation. A strong pipeline of renewable projects, including Genesis Energy's Rangiriri solar farm (437GWh/year), will support future supply. Green Steel intends to source all electricity via long-term agreements with renewable generators.[7] While the plant is grid-connected and may occasionally contribute to system-wide demand during peak periods, its operating strategy is to reduce load and trade electricity back to the market during high-emission conditions.

2.20 Lifecycle or upstream emissions, such as those from electricity use, are typically addressed through national emissions policies and energy regulations.

2.21 Quantifying GHG emissions from electricity use for any end-point use would require complex and speculative lifecycle analysis. Such emissions are not directly attributable to the activity for which consent is sought and fall outside the scope of assessment under the Resource Management Act 1991 ("RMA") as explained below.

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[5] Section 6.4.2 Attachment 29
[6] Mr Garg confirms his ongoing work considering the use of LFG in his statement at para 13.
[7] Confirmed by Mr Garg in his statement at para 14

Legal considerations

2.22 Responsibility for emissions associated with electricity generation lies with the generator, not the end user. This position is consistent with the Supreme Court's reasoning in *West Coast ENT Inc v Buller Coal Ltd*,[8] where the downstream climate effects of burning coal associated with a consent application to mine coal were found to be too remote to fall within the scope of s 104(1)(a).

2.23 In analysing this issue in *Te Runanga o Ngati Awa v Bay of Plenty Regional Council*[9] the Environment Court further clarified:

> [60] The ambit of the RMA in the context of considering an application for resource consent under s 104(1)(a) requires consideration of an effect of allowing the activity. It does not extend as far as considering any effect on the environment which… might be anything at all. There must be a causal relationship between allowing the activity and the effect…"
>
> "[61] Nexus here refers to the degree of connection between the activity and the effect, while remoteness refers to the proximity of such connection… These assessments are likely to be in terms of factors of degree rather than of absolute criteria and so be matters of weight rather than intrinsically dispositive…"

2.24 Any increased GHG emissions associated with downstream electricity generation do not have a sufficiently causal relationship with the use of electricity by the plant:[10] Electricity will be generated irrespective of whether it is used by Green Steel's plant. Extending climate change analysis to include emissions from electricity usage by the plant would imply that every electricity-consuming activity should be subject to the same scrutiny.

2.25 In any event, as electricity generation is subject to its own consenting regime, the necessary consents in place to generate electricity form part of the existing environment. Including the Genesis Energy Rangiriri solar farm referred to by Mr Carmichael there are a number of approved consents for future renewable energy generation that have yet to be

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[8] [2013] NZSC 87 – the Court referred to the principle that a consent authority must disregard effects that already form part of the existing or future environment, though these were not relevant in the Buller Coal case (at [125]).
[9] [2019] NZEnvC 196 (2019) 21 ELRNZ 539
[10] The plant will use 0[redacted]% of the current electricity load (per J Carmichael)

implemented.[11] Decision makers must disregard effects that form part of the existing environment.[12]

2.26 Accordingly, any GHG emissions from increased electricity use fall outside the scope of s 104(1)(a).

2.27 **Para [21] - Product quality and market demand**

2.28 Mr Garg explains that the plant will comply with the relevant Australian/New Zealand standard for hot-rolled structural steel bars and sections, thus ensuring the quality of the end products and suitability for sale in New Zealand. Supporting data from customs and industry sources demonstrates the availability of suitable domestic feedstock, including end-of-life vehicles and other ferrous scrap, with Green Steel anticipating the use of less than one-third of the total volume currently exported.

2.29 Further evidence is provided in relation to market dynamics and economic benefits. Mr Garg outlines a financial model based on competitively priced local production and demonstrates that the project will reduce reliance on imported steel and deliver material foreign exchange savings.

Para [22] - Carbon Price Assumptions

2.30 Castalia clarifies that the carbon price assumption is used solely as a valuation tool to monetise the emissions reduction benefit and that it is not a revenue stream for the Project. The NZ ETS market price and sensitivity analysis using the Treasury's shadow social cost of carbon were applied to convert the estimated reductions into dollar terms for inclusion in the cost-benefit analysis. These monetised benefits are presented separately from the "financial benefits" and are not treated as cash inflows to the Project.

Para [23] - Job creation and economic impact

2.31 Detail about the direct employment of 200 employees associated with operation of the plant is provided by Mr Garg. Castalia confirms that employment estimates reflect genuinely new jobs with higher-than-average wages, consistent with Treasury Guidelines on welfare gains.

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[11] Eg Annies Way Solar Farm, Glorit Solar Farm, Harmony Energy Opunake Solar Farm, Tauhei Solar Farm, Paihiatua Wind Farm – all granted approval under the COVID-19 Recover Fast Track Consenting) Act 2020 or the Natural and Built Environment Act 2023

[12] As discussed in *Queenstown Lakes District Council v Hawthorn Estate Ltd* (2006) 12 ELRNZ 299 (CA) at [84].

Para [24] - References to benefits in the AEE

2.32 Mr Garg and Castalia confirm that the benefits identified in the AEE Attachment 32 remain claimed and provide further information in support. Mr. Garg explains that the Project's ability to supply competitively priced, locally manufactured structural steel has the potential to reduce construction costs, particularly in high growth areas like Auckland. He also clarifies that the $320 million per annum foreign exchange benefit reflects the avoided cost of importing steel, calculated using historical import volumes, average unit values, and projected domestic production over the Project's operating life.

2.33 Both Mr Garg and Castalia identify reduced landfill waste as an additional environmental benefit, due to increased domestic recovery of end-of-life vehicles and whiteware.

2.34 In relation to social and environmental benefits beyond emissions, Castalia identifies a range of unquantified but material co-benefits, including strengthened local employment - particularly for iwi and hapū through partnerships such as with Ngā Muka Development Trust. These are consistent with Treasury guidance recognising non-market social and cultural effects as part of total welfare.

Para [25] – Plant Lifespan and Net Present Value Assessment

2.35 Castalia confirms that the net present value (NPV) assessment incorporates the plant's 20-year useful life and the staged production ramp-up from 2027 to full capacity in 2031. The NPV calculation spans the period from 2027 to 2046 and conservatively excludes any speculative terminal value beyond that timeframe.

Para [26] Economic Report's Assessment of Adverse Effects and Emissions Accounting

2.36 Castalia confirms the only material quantified adverse effect as the $855,000 NPV loss of 53 hectares of pastoral land.

Para [27] – Economic Report's Assessment of Unquantified Environment Effects

2.37 Castalia sets out additional environmental effects and clarifies that these are not quantified in the cost-benefit analysis as these are assessed as

minor relative to the Project's overall economic benefits. While not quantified, these co-benefits further strengthen the Project's positive net impact.

3. THE BENEFITS TEST

3.1 Section 22 of the FTAA sets the threshold for referral applications: a project must meet two limbs of the criteria to be accepted for referral including that it is an infrastructure or development project that would have significant regional or national benefits. Although "benefits" is not defined, s22 refers to factors the Minister may consider as meeting the benefits test. These include that a project will deliver significant economic benefits (s22(2)(a)(iv)), support climate change mitigation, including the reduction or removal of greenhouse gas emissions, (s22(2)(a)(vii)), or any other matter the Minister considers relevant (s22(2)(b)). The section ensures that only projects with meaningful public value are advanced through the streamlined substantive approval process.

3.2 The current drafting of the FTAA is clear that acceptance for referral under s22 is not the sole point at which the national and regional benefits are to be evaluated.. Once a project progresses to substantive assessment, the Panel is required to undertake its own evaluation of the extent of the claimed benefits to ensure that the statutory tests are properly applied.[13]

3.3 The purpose of the FTAA is "to facilitate the delivery of infrastructure and development projects with significant regional or national benefits." Section 17(1)(a) of Schedule 5 of the FTAA requires the Panel to give the greatest weight to the purpose of the Act when considering the Application.

3.4 Under s81(2)(f) the Panel may only decline the approval in accordance with s85. With respect to the consideration of adverse effects, to decline the approval under s85(3) the Panel must be satisfied that the adverse impacts are sufficiently significant to be out of proportion to the project's regional or national benefits:

> (3) A panel may decline an approval if, in complying with section 81(2), the panel forms the view that—

[13] Section 81(4) provides that "When taking the purpose of this Act into account under a clause referred to in subsection (3), the panel must consider the extent of the project's regional or national benefits."

> (a) there are 1 or more adverse impacts in relation to the approval sought; and
>
> (b) those adverse impacts are sufficiently significant to be out of proportion to the project's regional or national benefits that the panel has considered under section 81(4), even after taking into account—
>
> > (i) any conditions that the panel may set in relation to those adverse impacts; and
> >
> > (ii) any conditions or modifications that the applicant may agree to or propose to avoid, remedy, mitigate, offset, or compensate for those adverse impacts.
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> (4) To avoid doubt, a panel may not form the view that an adverse impact meets the threshold in subsection (3)(b) solely on the basis that the adverse impact is inconsistent with or contrary to a provision of a specified Act or any other document that a panel must take into account or otherwise consider in complying with section 81(2).
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> (5) In subsections (3) and (4), **adverse impact** means any matter considered by the panel in complying with section 81(2) that weighs against granting the approval.

3.5 For the Green Steel Project the Economic Report and supporting Addendum are clear that the Project has significant economic benefits with a projected NPV of nearly $[redacted] million.

Global versus Domestic Emissions

3.6 The Panel's concern that the Project will increase New Zealand's domestic CO_2 emissions is acknowledged. For the purposes of the benefits test the relevant question is whether this constitutes a sufficiently significant adverse impact that is out of proportion to the Project's regional or national benefits.

3.7 Climate change is a global phenomenon driven by cumulative greenhouse gas emissions, irrespective of national boundaries. While the Project may slightly increase New Zealand's domestic emissions, it displaces imported steel produced via higher-emissions processes associated with imported steel, thereby contributing to a net reduction in global emissions.

3.8 It would be inherently contradictory, and arguably hypocritical, for New Zealand to decline a domestic steel manufacturing project on the grounds of a small increase in local emissions, while continuing to rely on imported steel that carries a significantly higher global emissions footprint. If the goal is to reduce climate harm, then supporting low-emissions domestic

production is the principled path. To do otherwise is to externalise emissions, obscure accountability, and undermine the very purpose of climate regulation.

3.9 The Lumen Emissions Plan clearly characterises the residual 3,900 tCO_2e/year from LPG use as minimal in terms of adverse effects on climate change. Specifically, it:

a. Notes that this level of emissions is small in absolute terms and negligible relative to the emissions intensity of imported steel;

b. Assesses that the emissions are the result of a Best Practicable Option (BPO) design, including hot charging and scrap preheating, which significantly reduces LPG use;

c. Emphasises that the emissions are fully accounted for under the NZ Emissions Trading Scheme, meaning they are priced and regulated within New Zealand's national carbon budget;

d. Considers the overall climate impact of these emissions as minor, particularly when weighed against the global emissions reductions achieved by displacing higher-emissions imported steel.

3.10 Castalia's Addendum similarly confirms that these emissions are significantly lower than those associated with imported steel produced via blast furnace/basic oxygen furnace (BF/BOF) methods. Overall, the emissions are assessed as minor and incorporated into the cost-benefit-analysis which remains strongly positive.

3.11 It is only when adverse impacts (effects) are significant that the benefits assessment becomes critical as the benefits must be sufficiently compelling to outweigh those impacts.

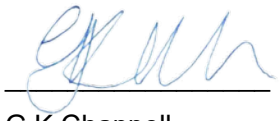
3.12 In this case, the minor domestic increase in emissions does not constitute a sufficiently significant adverse impact - especially when the overall climate impact is positive. Accordingly, the minor nature of the increase in domestic greenhouse gas emissions is not disproportionate to the Project's significant regional and national benefits, and does not meet the threshold for declining approval under section 85(3).

Summary

3.13 Supplementing the Economic Report and other information provided in the AEE, the responses provided to Minute 2 collectively verify the assumptions and information provided in those assessments and demonstrate that the Project will deliver a substantial total net benefit of close to $[redacted] million. These benefits appropriately include significant financial returns, the creation of a large number of high-value jobs in the Waikato region and improved relationships with and opportunities for local iwi. In addition, the Project enhances New Zealand's sovereign manufacturing capacity and supports strategic infrastructure development. The minor, domestic increase in greenhouse gas emissions is not disproportionate to the Project's significant benefits.

3.14 Taken together, these outcomes demonstrate that the Project will deliver significant regional and national benefits consistent with s81(4) and the purpose of the FTAA.

DATED this 14th day of November 2025



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