AKU INVESTMENTS LIMITED
5E/27 George Street, Newmarket,
Auckland 1023,
New Zealand.
[redacted]

11 November 2025

To Whom It May Concern

RE Green Steel [FTAA-2506-1074]

I have over 40 years of experience in electricity generation and electricity networks, both as an engineer and at governance level. I am a director of Aku Investments Limited, a company that provides strategic advice related to energy and electricity infrastructure. I was Regional Director Asia-Pacific for Powergen Plc for 8 years, I was a Director of Ranhill Power Berhad (Malaysia) for 4 years, I was a Director at Vector Ltd for 10 years, and am currently Director on the Boards of Electra Ltd, PowerNet Ltd, and The Power Company Ltd. I have a degree in Engineering, I am a Fellow Engineering NZ, and Chartered Member Institute of Directors.

I have been an advisor to Green Steel on energy related matters since January 2022 assisting it to optimise electricity consumption efficiency, and with site selection studies from an energy/electricity infrastructure perspective.

Below I respond to that part of paragraph 20 of the Panel's second Minute dated 31 October 2025 which seeks an assessment of the increase in CO_2 emissions from the electricity generation required to run the plant.

New Zealand's electricity generation is highly dependent upon hydrological factors (hydro inflows) and more increasingly other climate related (wind and solar) factors. The proportion of renewable electricity generation fell to 85.5% in 2024, down from 88.1% in 2023 due to low hydro inflows.[1](Carbon emissions from electricity generation were about 800kt in 2024. There have been considerable annual fluctuations, with a long term downwards trend.) New Zealand generated 43,879GWh of electricity in 2024.

Total electricity consumption from scrap to finished product is estimated at [redacted] When the plant achieves full production of 200kt/year, annual electricity consumption will be [redacted] of New Zealand's generation in 2024 terms.)

There is a strong development pipeline of renewable electricity generation in New Zealand, with renewable generation anticipated to exceed 90% (during a "normal" hydrological year) in the near future. As an example, Genesis Energy is developing a 271-megawatt-peak solar farm at Rangiriri, producing 437GWh per year of renewable energy and scheduled for commissioning in 2029. (The Rangiriri solar site is approximately 12km south of Green Steel's site.) The Rangiriri solar plant will generate more than 3 times the total energy required for Green Steel.

[1] (Source – MBIE Website)

I understand that Green Steel plans to purchase 100% of the plant's electricity requirements from renewable electricity developers via long term power purchase agreements. However, since the plant will be grid connected, it is recognised that from time to time, there may be net New Zealand system wide generation impacts that could be partly attributable to Green Steel's operational demand. These circumstances are predictable and foreseen through the electricity market price signals. The operating strategy during these periods of high national electricity demand, increased thermal generation, and consequential high spot prices, will be to reduce plant load and trade back the reduced electricity load to the NZ electricity market. Green Steel's impact on CO_2 emissions resulting from electricity consumption is therefore planned and anticipated to be minimal.

Yours faithfully,

J Carmichael

James Carmichael
Director