

**Tailored Energy Solutions Limited submission to the Ministry of  
Business, Innovation and Employment  
on a draft Critical Minerals List for New Zealand  
10 October 2024**

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We welcome the opportunity to submit on the Wood Mackenzie (Woodmac) [New Zealand Draft Critical Minerals List](#) for the Ministry of Business, Innovation and Employment.

**INTRODUCTION: About Tailored Energy Solutions Limited (hereafter called TESL):**

TESL occupies a unique position as an independent energy distribution business, operating throughout the South Island of New Zealand. While coal is our core energy business, TESL also offers biofuels, combustion efficiency services, and ETS management on behalf of clients.

The New Zealand resource extraction industry is based on currently identified / available minerals for the local and global market demand. These mineral resources are well documented through the MBIE Crown Minerals permitting process. The reasoning behind a critical minerals list carries an inevitable shortcoming in being unable to take into account future minerals that may yet be discovered. In our view, the creating of a rigid list system **must not** preclude the future development of what may be a “critical” mineral for the future advancement of New Zealand’s extractive industry. It is accepted that a list can be reviewed, however, how often does this occur in practice? **Add COAL to the Critical Minerals list!**

If the Government insists on proceeding with a critical minerals list, TESL considers that coking & thermal coals **must** be added to it for the following reasons – which relate solely to thermal coals, wherein lies our expertise:

1. There is **NOT** an abundance of thermal coals available to the South Island process heat market as claimed by some sectors. The current South Island thermal coal suppliers have a foreseeable timeline depletion due to lack of resource development, resulting from an era of negative investment, driven by the aggressive anti-coal mining legislation and regulation of former Governments, and taken up by local governments.
2. Individual local and regional authorities set varying specifications for the combustion of thermal coals for process heat producers within their districts and regions. The lack of a national standard specification for the utilisation of thermal coals has enabled the development of some mines, and the demise of others. Legislation based on **emissions-based** measures, rather than coal specification input, would encourage the use of a wider scope of coal resources available to the domestic industrial market while focusing on the development of solid fuels combustion units that capture emissions.
3. The setting of an **emissions standard** for solid fuel boilers would allow the development of coal resources with specifications that are currently restricted in the South Island market due to a “Coal In” tight specification. The current approach reflects ignorance on the part of policymakers of how coal-fired boilers work from an engineering perspective. Thus, alleviating the current fragility of a limited domestic industrial thermal coal supply throughout the South Island.

### **The perilous state of the thermal coal industry:**

Since 2019 four of our South Island supplier mines have closed due to the aggressive and negative policies of former Governments relating to coal mine development i.e. land access issues, subsidisation of alternative energy fuels, regardless of the economics.

This leaves three potential domestic thermal coal suppliers on the West Coast and three in Southland; of these at least two will close within the next 3 – 4 years due to disincentives for investment, compounded by land access issues.

The South Island thermal coals are essential for underpinning the processing heat requirements of the primary producers in the South Island.

If thermal coals were immediately withdrawn from the South Island energy supply chain the economic wellbeing of the dairy, meat and horticulture industries would be severely compromised.

The coal mining industry, as per other extractive industries, provides diverse employment opportunities in remote regions within an environment that provides skills development that very few other industries offer. It is also the value chain of people in the industry that is at risk.

Not all coals are equal, each individual coal mine produces a narrow specification of coal type which can vary between the individual coal seams layered within each mine.

As an example: a West Coast mine produces coal at 26Mj/kg energy value which is too “hot” for most coal-fired boiler designs. It is therefore necessary that this high energy coal is “blended” downwards with lower-ranked lignite coals from Southland to achieve the desired and most efficient combustion process for utilisation in thermal coal-fired boilers meeting environmental specifications.

Therefore, each coal mine makes a valuable contribution to the overall South Islands energy market, in its own way, as part of an encompassing blended supply to achieve narrow specifications for individual site environmental consenting standards and emissions targets.

One must consider why South Island coals are not utilised by New Zealand’s only coal fired power station. The coal required for the Huntly boilers is a very tight specification produced locally in Huntly and imported from overseas to meet the demand and the specification required. The West Coast coal mines are simply not able to produce the volume/specification required or have the infrastructure to export a larger tonnage of thermal coals due to the existing demand for rail services for coking coals.

The South Island of New Zealand relies on coal for industrial heat processing. While some industries have transitioned away from coal as their primary heat source, there remain a critical number of primary heat processing locations that are unable to transition due to lack of alternatives, heat temperature required, security of supply and location of processing plant. These plants fuel dairy and other food processing, as well as hothouse horticulture.

The future of the thermal coal industry in the South Island remains in doubt, acknowledging the present Government’s intentions to reverse the legislative harm done by previous governments. The ability of previous Governments to indulge ideological whims via policy settings that demonstrate no understanding of energy policy highlights a risk to our industry of supply chain disruption.

For the above reasons – pivotal economic importance for South Island industries, and risk of supply chain disruption – it is the duty of the present Government to add coal to the critical minerals list.

## **Recommendations:**

### **TESL makes the following recommendations to MBIE -**

- a) Coal to be recognised as a **Critical Mineral** – without coal there would be a severe shortage of energy for process heat in the South Island because of a lack of viable alternatives. The South Island energy supply is underpinned by coal.
- b) Establish a standard thermal coal specification across New Zealand based on emissions output rather than coal specification input to the boiler. This would widen the coals available, as single-source, direct-supply coals to the thermal coal market, as well as incentivise boilers to be constructed to reduce emissions.