

# Submission on the proposed Minerals Strategy for New Zealand to 2040

31 July 2024

Thank you for the opportunity to submit on the Ministry of Business, Innovation and Employment's (MBIE) consultation on *A Draft Minerals Strategy for New Zealand to 2040* (Minerals Strategy).

We support the proposed Minerals Strategy. We have identified two further opportunities for improvement set out below. This submission contains no confidential information.

## The minerals stocktake should record any underground storage potential

The proposed Minerals Strategy commits to "engage Geological and Nuclear Sciences Limited [GNS] to complete a detailed stocktake of New Zealand's known mineral potential." We support this stocktake and recommend that the scope of the stocktake should include the potential for underground storage of gaseous hydrogen.

One of the challenges of the clean energy transition is providing long-duration storage of energy to back up the electricity system during long periods of low output from intermittent and seasonal renewables. Internationally, one of the leading technologies vying to provide that long-duration storage is underground hydrogen storage. Many places in the world have large salt deposits that they are able to create cavities within for the storage of the hydrogen. Our understanding is that New Zealand does not.

When GNS complete their stocktake, they should be mindful of the opportunity posed by underground cavities including porous rocks. The University of Canterbury-led Pūhiko Nukutū project is investigating hydrogen geostorage in depleted gas fields and sedimentary rocks.<sup>1</sup> Care should be taken for GNS not to duplicate Pūhiko Nukutū work, although the scope of Pūhiko Nukutū is relatively narrow.

If there are other prospective minerals GNS are aware of with relevant properties (soluble and impermeable) suitable for creating stable underground cavities, these should be identified in the stocktake.

## The Crown Minerals Act needs to account for storage

Paragraph 3g of the Minerals Strategy commits to "...investigate the efficiency of the Crown Minerals Act system as it relates to the allocation and management of emerging minerals such as natural hydrogen" within the first three years of the Minerals Strategy.

We support this and are comfortable with the lower-priority timing. We recommend that this investigation needs to examine the suitability and efficiency of the Crown Minerals Act for permitting injection and re-extraction of non-natural hydrogen. This non-natural hydrogen may or may not be co-mingled with natural hydrogen.

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<sup>1</sup> The project's webpage is <https://www.puhikonukutu.nz/>