Submission No 56

INQUIRY INTO 2024 ANNUAL REPORT OF THE NET ZERO COMMISSION

Organisation: The Superpower Institute Ltd

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The Superpower Institute

www.superpowerInstitute.com.au

2024 Annual Report of the Net Zero Commission

Submission to the NSW Joint Standing Committee on Net Zero Future

February 2025

About The Superpower Institute

The Superpower Institute's (TSI's) mission is to help Australia seize the extraordinary economic opportunities of the post-carbon world.

A net zero Australian economy will reduce global emissions by just over 1 per cent. But if Australia successfully seizes the economic advantage in exporting zero emissions goods, this can create an opportunity for full employment with rising incomes for a growing population sustained over more than a generation, and reduce global emissions by up to 10 per cent.

Renowned economist Ross Garnaut and economic public policy expert Rod Sims have joined forces through The Superpower Institute, to focus on practical research and policy to unlock this opportunity. The Institute specialises in the policy settings and market incentives needed to make Australia an economic superpower and provides practical knowledge to governments and industry to realise this opportunity.

TSI works across the building blocks of the superpower economy including: renewable energy, green hydrogen, land carbon and minerals processing; the potential zero carbon export products including green iron and green aluminium; and the enablers of this economy including economic and fiscal policy, trade policy and regional development.

https://www.superpowerinstitute.com.au/.

About Open Methane

To successfully transition to a zero-carbon economy, clear and accessible data on energy use and emissions is essential. The Superpower Institute has developed the Open Accessible Auditable Data (OAAD) framework to meet this need.

Open Methane is a free, open-source platform developed under the OAAD framework for detecting, measuring and locating Australia's methane emissions. Utilising satellite observations and environmental modelling, it provides an up-to-date, continent-scale view of methane emissions across Australia.

About this submission

Please contact TSI with any queries

Introduction

TSI welcomes the opportunity to contribute to the Joint Standing Committee on Net Zero Future's inquiry into the 2024 Annual Report ('the Report') of the Net Zero Commission ('the Commission').

TSI welcomes the Commission's focus on future developments in the resources sector (such as proposals for coal mine extensions and continuations), noting the significant contribution of fugitive methane emissions to New South Wales' greenhouse gas inventory (Section 2.6 of the Report). Analysis from the Open Methane platform shows that six New South Wales mines are within the top 20 methane-emitting sites in Australia, including mines in the Gunnedah Basin, Hunter Valley, and Sydney Basin.

In addition, Open Methane estimates, based on observed data, that fugitive methane emissions from coal mines around Australia may be around twice the amount that is currently reported in the national greenhouse gas inventory. These results align with the monitoring work by the Australian atmospheric chemistry research community and analysis by global organisations such as the International Energy Agency and MethaneSat.[1] This discrepancy suggests that improvements need to be made both to greenhouse gas measurement and reporting methodologies under the NGERS framework, and to the real-time monitoring of emissions at the facility level.

To the latter point, TSI supports the establishment of a National Emissions Monitoring Network ('the Network'), which would support both on-ground emissions monitoring and satellite ground-truthing. The Network would support the verification of facility-level modelling through comparisons to aggregate regional bottom-up reporting, support the attribution of emissions to source sectors through the measurement of co-emitted tracers, and improve alignment of bottom-up and top-down emissions monitoring. This would also align to work being undertaken by the NSW EPA in developing guidelines for facility-level emissions monitoring. The full Network roadmap is available on TSI's website.

Further Information

Please contact TSI's Chief Scientist, Emeritus Professor Peter Rayner via

[1] This includes, for instance, work undertaken by UNSW in relation to methane emissions from coal seams in the Bowen Basin.