



AHC Submission in response to the Draft Network Infrastructure Strategy

Australian Hydrogen Council
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Submission to the NSW Government

Joe Kremzer
General Manager Policy
Australian Hydrogen Council
m: +61 413 266 081
e: jkremzer@H2council.com.au
w: H2council.com.au

About the Australian Hydrogen Council

The Australian Hydrogen Council (AHC) is the peak body for the hydrogen industry, with 103 members from across the hydrogen value chain.

Our members are at the forefront of Australia's hydrogen industry, developing the technology, skills and partnerships necessary to build Australia's hydrogen economy.



AHC is pleased with the NSW Government's approach to developing its Draft Network Infrastructure Strategy. In its 2021 White Paper, AHC called for the planning in the national interest¹, and while a truly national strategy will require action from state and federal governments, we consider that EnergyCo's coordination with broader national processes, namely AEMO's Integrated System Plan (ISP) is consistent with this approach.

Developing Australia's hydrogen industry

Hydrogen is just one of the many tools that Australia will use to achieve net zero emissions. We believe that to maximise NSW's (and in fact Australia's) chances of developing a commercial green hydrogen industry, it should be done within the context of achieving economy wide decarbonisation. That is, first determining and defining hydrogen's role within the broader net zero story and developing infrastructure wholistically in pursuit of this outcome. NSW has previously demonstrated its understanding of this approach by through elements of its hydrogen strategy such as by incentivising green hydrogen production to areas of the network where spare capacity is available². This approach will ensure that hydrogen production complements the decarbonisation of the grid and does not cannibalise renewable energy resources which could be put towards decarbonising by other means (ie, displacing fossil fuel generation from the NEM).

Consistent with this approach, we support the Draft NIS' indication that the focus of the initial Final NIS will be on network options for connecting electricity supply to replace retiring generators. A more direct focus on the establishment of a large-scale hydrogen economy should follow in future iterations. This said, it is crucial that the initial NIS options do not preclude future hydrogen development.

We note that while the currently proposed Renewable Energy Zones (REZ) could be used to support hydrogen developments if it is practical and economically feasible, the indicated Zones in the Hunter and Illawarra are likely to be centres for considerable hydrogen production and use due to their proximity to industrial load. The transition to net zero must be appropriately mapped out so that the right investments in the right technologies are made in the right geographic areas and we consider that the right investments with regard to hydrogen are likely to be made following grid decarbonisation and are more likely to occur within the indicative zones.

The economics of hydrogen production is likely to vary from one location the next, depending on the quality of the renewable resources, proximity to demand sources and potentially on policy developments such as the development of a capacity market or NEM settings which impact the extent to which electrolyzers can provide grid services. It is imperative that EnergyCo plans for NSW's infrastructure needs in a way that enables an efficient and timely transition to net zero.

We support the recognition in the Draft NIS that a flexible, option rich pathway towards decarbonisation is necessary. This need for flexibility is especially acute in an environment where there is considerable uncertainty about future electricity needs. Emissions from the combustion of

¹ Australian Hydrogen Council (2022). Unlocking Australia's Hydrogen Opportunity. p.7.

² Via the Green Hydrogen NUoS Exemptions Scheme

hydrocarbons for transport and heating (both domestic and industrial) will be mitigated by some combination of hydrogen (and other renewable gases), energy efficiency and electrification and the infrastructure needs for the various combinations of these will differ greatly. The Final NIS can drive the right investment by outlining a clear objective and desired outcomes while acknowledging future uncertainty.

Summary

AHC welcomes the development of the Draft NIS and encourages EnergyCo to continue to engage in national processes such as AEMO's ISP and the Net Zero Australia project which will plan for Australia's decarbonised energy future. We believe that the approach outlined in the Draft NIS sets a solid foundation for the Final NIS to support NSW's transition to net zero emissions.

We look forward to continuing to engage on this matter.

If you wish to discuss any element of this submission in further detail, please contact Joe Kremzer, General Manager, Policy on 0413 266 081 or email jkremzer@h2council.com.au