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Hydrogen Headstart Taskforce
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AI GROUP RESPONSE TO THE HYDROGEN HEADSTART CONSULTATION PAPER

The Australian Industry Group (Ai Group) welcomes the chance to make a submission on the [Hydrogen Headstart Consultation Paper](#) (the Paper).

Ai Group is a peak national employer organisation representing traditional, innovative and emerging industry sectors. We have been acting on behalf of businesses across Australia for nearly 150 years. Ai Group is genuinely representative of Australian industry. Together with partner organisations we represent the interests of more than 60,000 businesses employing more than 1 million staff. Our members are small and large businesses in sectors including manufacturing, construction, engineering, transport & logistics, labour hire, mining services, waste services, the defence industry, retail, aged care, civil airlines and ICT.

Our members may be affected in several ways by the Hydrogen Headstart program and the wider industry it seeks to catalyse. Some are potential hydrogen offtakers. Some could supply goods and services to either the hydrogen sector or to potential hydrogen-intensive manufacturing activities such as green iron production or a greatly expanded ammonia industry. All have a stake in successful Australian and global responses to climate change that sharply limit warming while maintaining and increasing prosperity.

The Hydrogen Headstart Program has the potential to make an important contribution. However, it requires clear objectives that flow through to a streamlined, competitive, transparent and flexible program design. Even with these provisos, Hydrogen Headstart will not be the final word in the development of an Australian hydrogen sector. Multiple policies will be involved, and our challenge is to achieve synergy rather than fall into confusion. We address key issues in the **Annexure**.

For any questions in relation to this submission, please contact Ai Group Director of Climate Change and Energy Tennant Reed (tennant.reed@aigroup.com.au, 0418 337 930).

Sincerely yours,

Louise McGrath
Head of Industry Development & Policy

Annexure

Key issues

Objectives

A successful program will be guided by objectives that are clear, strategic and prioritised.

Cleanly produced hydrogen has several potential roles in a net zero emissions global economy. The most important barrier to its relevance in these roles is the high cost of producing clean hydrogen. The large export-oriented hydrogen industry and the hydrogen role in domestic decarbonisation that Australians hope for both require hydrogen to become much cheaper.

With respect to electrolytic hydrogen there is good evidence of a significant learning rate for electrolysis, in addition to the obvious strong learning rates for key renewable electricity generation technologies. Those learning rates can deliver much lower-cost clean hydrogen, but only through strong global and local deployment of these technologies while they are still relatively expensive.

This is the fundamental justification for the Hydrogen Headstart program and comparable policies elsewhere. The direct benefits of early clean hydrogen production will be limited in scale and high in cost compared to other abatement opportunities. Even among hydrogen production technologies, electrolysis is relatively expensive today. The value of technology-specific early subsidies is overwhelmingly in the impact that early deployment can have in accelerating cost declines for future installations and thus moderating the long-term cost of our total transition to net zero emissions.

The Hydrogen Headstart program's proposed Competitive Round Objectives are consistent with this viewpoint, but it would be helpful to state more explicitly the overarching objective of driving long-term cost reductions by driving deployment of electrolytic hydrogen. This implicitly lies behind the proposed objectives.

Streamlined, competitive and transparent program design

To fulfil the objective of cost reduction the Program will need to maximise the volume of electrolyzers that is able to be deployed using the \$2b of funding support available. This in turn requires a process for awarding support that has strong competitive tension, allows project proponents to know where they stand, and is as straightforward as possible for government to administer.

Ai Group is worried that the proposed merit criteria are too numerous and unprioritized to meet these needs. The issues raised by the criteria are all worthy and important. But criteria that require three pages of dot points to summarise, without yet including explanatory material, risk being excessively complex and confusing for bidders and administrators.

The best response should be to reduce the list of *merit* criteria sharply, and preferably to one: cost competitiveness in terms of the lowest strike price bid by proponents in a reverse auction process. This should make it very clear why projects succeeded or failed to receive support, and incentive maximum deployment.

Other issues such as proponent capability and capacity to deliver a committed project are very important. But they should be addressed as eligibility requirements or threshold criteria, not merit criteria. Either the Government is satisfied that a proponent is financially sound, or they are not. If the latter, the proponent should not be in the running.

An alternative might be to weight Criterion A more highly, but this is unsatisfactory. A high weighting would create the potential for an impossible-to-deliver low bid prevailing on price grounds. A moderate weighting would greatly dilute the focus on the key deliverable from this whole program.

One likely consequence of a program centred on the most cost-competitive projects is that local offtake may predominate over export-oriented projects. That is because of the large energy losses, extra capital investment needs and resultant higher costs associated with seaborne transport of hydrogen as opposed to

using it near where it is made. The level of subsidy required to make export projects attractive to offtakers may be significantly higher than for local users, except where additional subsidies are available in the export market or competing energy sources are dramatically more expensive than in Australia.

A further merit issue relates to emissions reductions. There has been significant debate in Europe and the United States around the design of their hydrogen policies and the fear that the use of non-additional generation to power electrolysis could increase total emissions. The mechanism for this fear is that if existing low-cost clean generation is devoted to new electrolysis, surviving high-emissions generators will fill the gap at the margin and emissions will not be reduced.

Potential solutions discussed in the US and EU include requirements for projects to have associated dedicated new clean generation; and/or to demonstrate matching at some timescale between project demand and contracted clean generation supply.

This issue may be less relevant in the Australian context, where there is no legacy of low-emissions nuclear generation and otherwise-curtailed renewable generation is far too small to support electrolysis on the scale sought by the Headstart program. Studies such as those for the Australian Industry Energy Transitions Initiative and the Net Zero Australia project indicate that the most cost-competitive hydrogen is likely to be produced by facilities that are either off-grid or connected to major grids only for the provision of limited demand response services.

Given all this, and that the overriding objective of a program like Headstart should be accelerating deployment of electrolyser capacity, a project lifecycle emissions intensity maximum may not add much beyond what a cost competitiveness criterion achieves. If a maximum is set it should be implemented as simply as possible.

Flexibility

Over the decade that initial Hydrogen Headstart supports may run, we can be confident that domestic and international policy and markets will continue to evolve. Some plausible changes may greatly affect the level of Headstart subsidy needed by projects, such as the spread of carbon prices in major and local markets and the use of carbon border adjustments to internalise carbon prices in product selling prices; or the increased willingness of some major customers to pay green premiums for clean products.

It is therefore important that the program design allows subsidy levels to flex with relevant market and policy conditions. The proposed funding mechanism appears to meet this requirement and that will be important to preserve. Where a project turns out to need less top-up subsidy than anticipated, that might allow the program to either support a greater volume of deployment than expected – further speeding local and global cost declines – or to free up program resources for other critical needs.

On technology neutrality

The Hydrogen Headstart program is technology-specific, focussed on deployment of electrolytic hydrogen. While Ai Group has often supported technology-neutral climate and energy policies, there is a rationale for focussing the Headstart program. Australia needs both policies that maximise the abatement from those options that are currently cheapest, and policies that bring further abatement options to readiness through early deployment. The former will typically be most efficient when technology neutral, while the latter may not be functional unless they are technology specific. Electrolytic hydrogen represents an enormous potential opportunity for Australia in the long term, but requires considerable deployment to reduce costs to the point where that opportunity can be achieved.

However, Australia should remain open to the potential value other forms of clean hydrogen. Fossil- and bio-derived hydrogen paired with high-rate carbon capture and storage and close management of upstream emissions can achieve dramatic reductions from current emissions, and with sustainably harvested biomass may be another much-needed tool for negative emissions. Naturally occurring hydrogen may turn out to be significant. While Headstart is properly focussed on electrolysis, other policies, including the Safeguard Mechanism and the Guarantee of Origin, should recognise any form of hydrogen that can deliver on its promises.