



Gold
Hydrogen

**The Gold Standard in
Green Energy**

**Sustainability Report
2024**



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Introduction



1. Introduction

1.1 A Message from the Chair and the Managing Director

To our Shareholders and Stakeholders

The Company's Board and management team continue to be extremely conscious of the role of sustainability, its governance, and its daily management in the conduct of our operations. Sustainability continues to be integrated into our business strategy, and will continue to be a critical driver of the Company's overall social and economic performance.

The past year has seen the initiation of our project related activities on the Yorke Peninsula in South Australia, where we have successfully drilled and tested our first two exploration wells without any OH&S, environmental or regulatory breaches. A full operational overview is set out in our 2024 Annual Report, whilst highlights relevant to this Report are outlined in Section 1.3 below.

The Company continues its primary focus on the ultimate development of natural 'gold' hydrogen as a naturally generated, low-carbon energy source. However, with helium also encountered during the drilling of the Company's first two exploration wells, the opportunity exists to capitalise on an emerging 'green helium' market (ie. helium not generated in conjunction with a fossil fuel development) as part of the Company's future plans.

We appreciate the importance of global metrics for sustainable development and support the increasing international standardisation of sustainability reporting. We will embrace new consolidated standards being developed by the International Sustainability Standards Board (ISSB) as required, while continuing to report our Climate Change risks and opportunities as part of our compliance and annual reporting obligations under the TCFD (Taskforce on Climate-related Financial Disclosure) requirements.



This Sustainability Report is a companion to Gold Hydrogen's 2024 Annual Report and Corporate Governance Statement, and has been approved by the Gold Hydrogen Board. The Sustainability Report has been prepared for our shareholders, and our stakeholders including our employees, contractors, suppliers, local communities, potential customers, and providers of capital.

We would like to thank all the members of the wider Gold Hydrogen team for their focus on creating long-term value, and we acknowledge our various stakeholders for their support of our corporate and project-related activities to date.

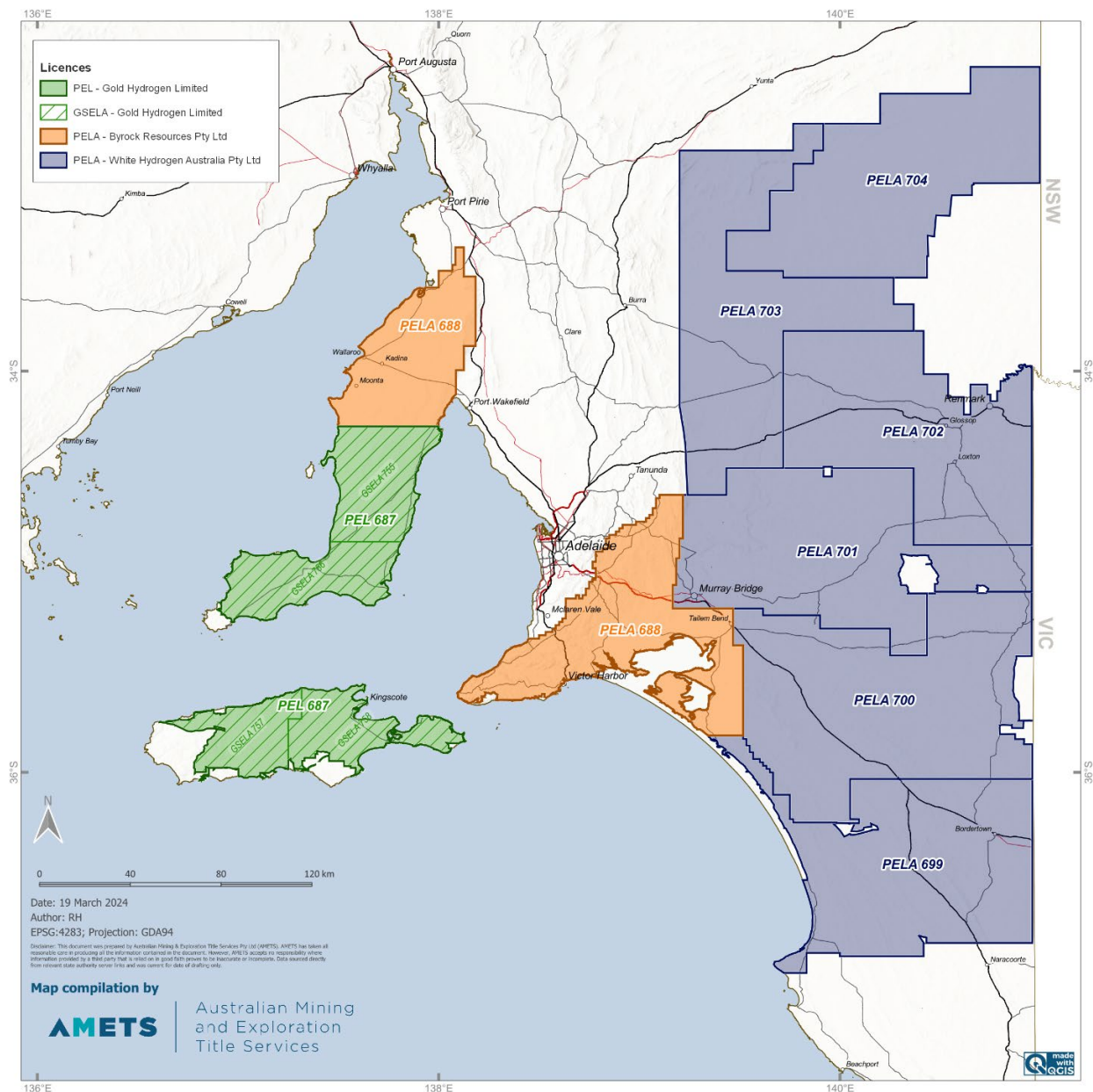
We pledge our ongoing respectful engagement with our stakeholders into the future as part of our ongoing commitment to integrity and excellence.

The Hon Alexander Downer (Chair) and our Local Community Liaison Officer on the land where the Ramsay 1 & 2 wells were subsequently drilled.

1.2 About the Company and its Projects

Gold Hydrogen is focused on the discovery and development of world class natural hydrogen and helium gases in a potentially extensive province in South Australia. This region has recently had its natural hydrogen and helium potential confirmed by the Company via its maiden drilling campaign, conducted in Q4, 2023. The domestic and global demand for hydrogen and helium, combined with new exploration techniques and experienced personnel, provides Gold Hydrogen with an extraordinary opportunity to define and ultimately develop a new natural hydrogen and helium gas province.

The combined permit area of the Gold Hydrogen group is approximately 75,332km². Gold Hydrogen holds one granted exploration license (the Ramsay Project - PEL 687) and its two 100% owned subsidiary companies (White Hydrogen Australia and Byrock Resources) hold an additional seven (7) applications within South Australia. Gold Hydrogen is also the preferred applicant for four (4) gas storage exploration licenses applications (GSELA) covering an area of 8,107km² within the Yorke Peninsula portion of PEL 687 in South Australia. These storage licence applications are in addition to the granted exploration licence and application licences, as outlined in **Figure 1** below.

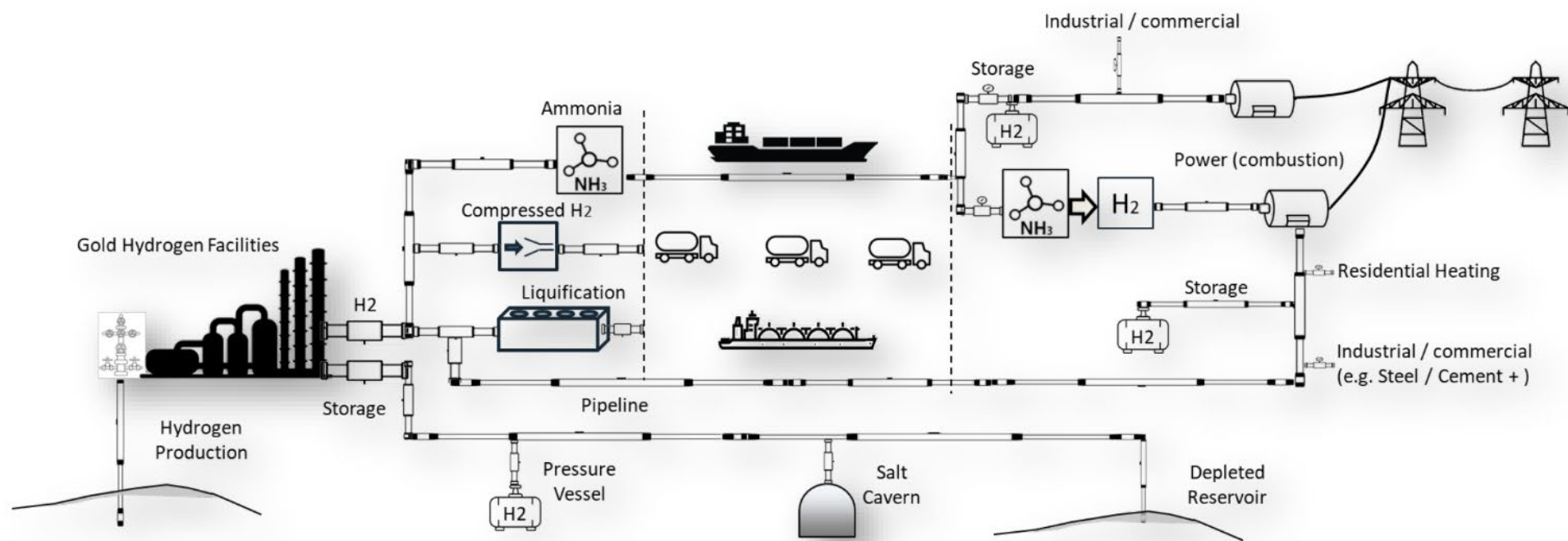


Gold Hydrogen Company gas-related tenement and areas under application located in South Australia.

Gold Hydrogen is aiming to become the leading Australian proponent for the exploration, discovery and development of a natural hydrogen and helium project (or projects) in Australia. Gold Hydrogen's flagship Ramsay Project, predominantly situated on the Yorke Peninsula of South Australia, had its natural hydrogen and helium potential confirmed by the Company via its Q4, 2023 maiden drilling campaign.

The Company's Ramsay Project is currently in the exploration and early appraisal stage of the project, and the overall project plan follows a typical traditional path for the maturation of an exploration play through the following stages:

- (i) Undertake exploration and appraisal activities to confirm the existence of natural hydrogen and helium resources and demonstrate the commercial viability of the project;
- (ii) Project development which involves drilling of production wells and installation of surface facilities for delivery to market;
- (iii) The production of natural hydrogen and helium, and sale to various market consumers. Potential options for the monetisation of the Company's hydrogen include onsite electricity generation, pure hydrogen generation and distribution, distribution to local ammonia plants, hydrogen transportation via pipelines or truck, and storage applications. Once extracted at surface, helium can simply be bottled on site for sale into the domestic Australian market.



Examples of Downstream Hydrogen Distribution and Usage

2023 / 2024 Activities at a Glance

A comprehensive Review of Operations is available in the Gold Hydrogen 2024 Annual Report.

For the twelve-month period since the Company published its inaugural Sustainability Report, its material project-related developments have included:

- (i) drilling Australia’s first two hydrogen-purposed wells, Ramsay 1 and Ramsay 2, in late 2023;
- (ii) proving the existence of a natural hydrogen system and a helium system at the Ramsay Project;
- (iii) testing the Ramsay 1 and Ramsay 2 wells and reporting high purities of both natural hydrogen and helium;
- (iv) aggregated historical and current data sets to identify the existence of natural hydrogen and helium across the Yorke Peninsula;
- (v) undertaking a 575 line kilometre 2D seismic survey over the Yorke Peninsula to assist in the delineation of the natural hydrogen and helium plays encountered to date, identify other potential natural hydrogen and helium accumulation(s) within the Yorke Peninsula and support the identification of future drilling targets.

1.3 Our Core Values

Being a values-led organisation allows the Gold Hydrogen team to deliver on its purpose and strategy. The Company, via its Board, senior management and employees, hold the following core values central to their actions:



EXCELLENCE

- We strive for one quality standard in everything we do: Excellence.
- We use any mistakes, failures or set-backs as a learning opportunities to improve our planning and performance.
- We encourage all of our stakeholders to contact us openly or via our Whistleblower mechanism to let us know where there is opportunity for improvement, or have failed to demonstrate the Core Values outlined in this document.

INTEGRITY

- We will always act with honesty and fairness, and do what we have committed to do. We have a Code of Conduct & Business Ethics which enshrines how we aim to conduct ourselves.
- We will always report with integrity, including financial results, technical and field-related results, environmental and community issues, and workplace health and safety matters.

RESPECT

- We will treat all of the Company's stakeholders with respect.
- We will respect the communities and environments in which we operate.
- We will respect the laws and regulations governing the Company and its operations.

SUSTAINABLE DEVELOPMENT

- We will make a positive contribution to the decarbonisation of the economy and the green energy sector.
- We will conduct the activities of the Company in a responsible and sustainable manner, having regard to the applicable United Nations Sustainable Development Goals and its 2030 Agenda for Sustainable Development.
- We will remain mindful of the human, economic, social, and environmental impacts of the Company's activities.

PERFORMANCE

- We will strive to deliver a positive financial outcome for the Company's shareholders.
- We will strive to make a positive contribution to the lives of our employees and broader stakeholders.
- We will strive to make a positive contribution to the decarbonisation of the economy and the green energy sector.

1.4 Our Approach to Governance, Sustainability and Transparency

The Board of Gold Hydrogen recognises the importance of good corporate governance and sustainability frameworks and practices, and their importance to the Company realising its potential and fulfilling its obligations to its range of stakeholders. Whilst the Company's Corporate Governance Charter provides the framework for the establishment of an Environmental, Social and Governance (**ESG**) Committee, this function is currently undertaken by the full Board of Directors.

The Company has a comprehensive suite of governance related policies and materials, including:

Policy Documents

- Anti Bribery and Corruption Policy
- Assessing the Independence of Directors Policy
- Board Performance & Evaluation Policy
- Conflict of Interest Policy
- Continuous Disclosure Policy
- Diversity and Inclusion Policy
- Fraud Control Policy
- Privacy Policy
- Related Party Transactions Policy
- Responsible Sourcing and Modern Slavery Policy
- Risk Management Policy
- Securities Trading Policy
- Sustainability Policy
- Whistleblower Policy

Additional Documents

- Board Charter
- Code of Conduct and Business Ethics
- Core Values Statement
- Corporate Governance Charter
- Delegation of Authority
- Employee Share Option Plan
- Audit and Risk Management Committee Charter
- People, Culture and Resources Committee Charter

A number of these documents are summarised in brief in this Report, and copies of the full documents are available on the Company's website (goldhydrogen.com.au) under *Investor Centre / Corporate Governance*.

1.5 Our Alignment with the United Nations Sustainability Development Goals

Gold Hydrogen's primary focus on ultimately producing natural hydrogen aligns with the United Nations' Sustainable Development Goals (SDG's) by actively contributing to the development of sustainable energy solutions. Through our pioneering exploration efforts in South Australia, we are striving to advance a clean and efficient energy source, foster environmental responsibility, and promote technical innovations in the pursuit of a more sustainable future.

Furthermore, with helium also encountered during the drilling of the Company's first two exploration wells, the opportunity exists to capitalise on an emerging 'green helium' market (ie. helium not generated in conjunction with a fossil fuel development) as part of the Company's future plans.

United Nations Goal



Gold Hydrogen commentary

Gold Hydrogen aims to contribute to good health and well-being via the discovery and supply of natural hydrogen as a sustainable and clean energy source on an economic basis. The expected transition to cleaner energy sources will promote a healthier environment, which is expected to positively impact planetary well-being and reduce the burden of health-related issues caused by fossil fuel related emissions, pollution and associated Climate Change factors.

Furthermore, with helium also encountered during the drilling of the Company's first two exploration wells, the opportunity exists to capitalise on an emerging 'green helium' market (ie. helium not generated in conjunction with a fossil fuel development) as part of the Company's future plans.



Gold Hydrogen respects and values the potential competitive advantages associated with the adoption of gender equality and diversity in its employment processes and environment.

As the size and scale of our operations increases, we intend to continue to foster and promote an inclusive work environment where all employees, regardless of their gender or diversity, have equal opportunities to excel and contribute. By promoting diversity and inclusivity, we aim to empower people within our workforce and the communities in which we operate on an equitable basis.

Gold Hydrogen is focused on the exploration and development of 'gold' hydrogen as a naturally generated, low-carbon energy source. Accordingly, it is not aiming to 'make' hydrogen via electrolysis, which involves both power and water usage, as well as the construction of significant infrastructure and land usage (eg. for solar panels used in green hydrogen production).

We are dedicated to minimising water usage, and adhering to sustainable water management practices in all aspects of our operations.

Gold Hydrogen's business aligns perfectly with the goal of affordable and clean energy. By harnessing naturally occurring hydrogen generated through geological processes, we are aiming to provide a potentially renewable and low-emission energy source that can contribute to reducing the world's carbon footprint on an economical basis.

Our efforts are aimed at not only promoting the transition to clean energy, but also driving innovations in downstream hydrogen distribution technologies, making clean energy solutions more accessible and affordable.

Gold Hydrogen will aim to contribute to decent work and economic growth by creating meaningful employment opportunities and fostering economic development. Through our exploration and innovation efforts related to natural hydrogen, we expect to generate jobs across various skill levels, and to support local communities and economies.

Additionally, our commitment to employee well-being, fair labour practices, and skill development programs are aimed at enhancing job satisfaction, professional growth, and overall economic prosperity.

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



Gold Hydrogen is aiming to foster industry, innovation, and infrastructure advancements, particularly related to the downstream handling and distribution of hydrogen. Our pioneering exploration for natural hydrogen will also doubtless drive innovation across the energy exploration sector.

Additionally, by collaborating with research institutions, technology partners, and local stakeholders we will aim to assist with the creation of robust transportation and infrastructure options which support the integration of hydrogen into various industries, and promote sustainable economic growth.

11 SUSTAINABLE CITIES AND COMMUNITIES



Our operations are aiming to contribute to building sustainable cities and communities by providing an environmentally friendly energy solution that reduces urban pollution and carbon emissions. As we promote the adoption of hydrogen as an economically viable clean energy source, we will be aiming to support the development of cleaner transportation systems, heating solutions, and power generation methods that align with the sustainability goals of cities and communities.

This transition is expected to create liveable and resilient urban environments for current and future generations.

13 CLIMATE ACTION



Climate action is a central focus of our mission. By harnessing the potential of natural hydrogen, we are aiming to directly address the challenge of Climate Change. Our business objectives aim to contribute to the reduction of greenhouse gas emissions, providing a viable pathway to progress emissions reduction goals. The discovery of non-fossil fuel helium within our project area provides further opportunities in this regard.

The adoption of natural hydrogen as an energy source would contribute to lowering carbon footprints, accelerating the transition to renewable and non-fossil fuel energy sources, and represent a meaningful step towards a more sustainable and resilient planet.

17 PARTNERSHIPS FOR THE GOALS



Gold Hydrogen recognises the importance of partnerships for achieving the UN's Sustainable Development Goals.

We actively collaborate with governments, research institutions, local communities, and industry stakeholders to foster knowledge exchange, share best practices, and collectively work towards a sustainable future. By fostering these partnerships, we aim to leverage diverse expertise and resources to accelerate the adoption of natural hydrogen and advance sustainable development on an international basis.

 **SUSTAINABLE DEVELOPMENT GOALS**



Gold Hydrogen: The Gold Standard in Green Energy

Business Conduct Overview



2. Business Conduct Overview

2.1 Code of Conduct

Gold Hydrogen prides itself on its ethical approach to business via the conduct of its Directors, management, employees and contractors. It requires that these parties maintain high standards of integrity by ensuring that all business activities are conducted legally and ethically in compliance with the letter and spirit of the law, and in compliance with the Company's range of policies and published values.

The Board has adopted a **Code of Conduct and Business Ethics**, which is available on the Company's website under *Investor Centre / Corporate Governance*. The Code deals with a range of topics including, but not limited to:

- Responsibilities to shareholders
- Responsibilities to other stakeholders
- Employment practices
- Environmental responsibilities
- Commitment to fair dealings
- Conflict of interest management

2.2 Sustainability

The Company's Board and management team are conscious of the role of sustainability, its governance, and its daily management in the conduct of our operations. Accordingly, sustainability is integrated into our business strategy, and will be a critical driver of the Company's overall social and economic performance.

Gold Hydrogen, as an exploration company, faces inherent risks in its activities, including economic, environmental and social sustainability risks which may have a material impact on its ability to create value for its shareholders and its other stakeholders. The Board monitors the ongoing operational and financial performance of the Company's activities on a regular basis. Furthermore, the Board receives advice from management and consultants on areas of operational and financial risk, and considers strategies for appropriate risk management, including sustainability. All operational and financial strategies are aimed at improving the value of the Company's assets, and its potential impact on the environment, the community and its range of stakeholders.

The Company's Corporate Governance framework includes a Charter for an Environment, Social and Governance (ESG) Committee to review and monitor the Company's assessment and management of its ongoing social and environmental risks. However, given the current size and scale of the Company's operations, the Board currently performs the functions of this Committee, and where necessary seeks the advice of external advisors in relation to this role.

In line with its Core Values, the Company intends to continue to conduct all of its activities in a responsible, sustainable and safe manner, mindful of the potential human, economic, social and environmental impacts of its actions. The Company, via its ambitions to explore, develop and ultimately produce natural hydrogen, plans to make a positive contribution to decarbonisation and the green energy sector.

Furthermore, with helium also encountered during the drilling of the Company's first two exploration wells, the opportunity exists to capitalise on an emerging 'green helium' market (ie. helium not generated in conjunction with a fossil fuel development) as part of the Company's future plans.

The Board has adopted a **Sustainability Policy**, which is available on the Company's website under *Investor Centre / Corporate Governance*.

2.3 Responsible Sourcing and Modern Slavery

Gold Hydrogen is committed to ensuring that its operations continue to be conducted in a responsible, fair and sustainable manner, in line with its Core Values, and its Code of Conduct and Business Ethics. This extends to the responsible sourcing of goods and services and supply-chain relationships. The over-arching principle of responsible sourcing is to reduce the risk of illegal and human rights violations in the Company's supply chain and procurement processes.

The Company aims to work with suppliers who demonstrate their own commitment to sustainability, and ensure that their business operations and networks are free from modern slavery, and are driving to realise positive social and environmental outcomes.

The Board has adopted a **Responsible Sourcing and Modern Slavery Policy**, which is available on the Company's website under *Investor Centre / Corporate Governance*.

Gold Hydrogen encourages its suppliers to comply with relevant policies and procedures, including its Responsible Sourcing and Modern Slavery Policy. Purchase orders issued by the Company generally include terms and conditions which contain an explicit requirement that suppliers comply with Gold Hydrogen's Responsible Sourcing and Modern Slavery Policy.

2.4 Anti Bribery and Corruption

The Board takes a zero-tolerance approach to bribery and corruption and is committed to acting professionally, ethically and with integrity in all of its business dealings and relationships. This extends to implementing and enforcing effective systems to counter bribery and corruption, and the Board has established a written policy in this respect, including mechanisms for the reporting of potential or actual breaches.

The Board has adopted an **Anti-Bribery and Corruption Policy**, which is available on the Company's website under *Investor Centre / Corporate Governance*.

2.5 Whistleblowing

The Board has established and published a formal whistleblower procedure for making disclosures of information that qualify for protection under the Corporations Act or the Whistleblower Policy. It applies to Directors, management and employees of the Company (and their relatives), as well as suppliers of the Company (and their employees, contractors, suppliers, consultants and service providers).

The Board has adopted a **Whistleblower Policy**, which is available on the Company's website under *Investor Centre / Corporate Governance*.

Stakeholder and Community Engagement



3. Stakeholder and Community Engagement

3.1 Local Communities

Gold Hydrogen believes proactive and inclusive stakeholder engagement builds mutually respectful and beneficial relationships. Open and respectful engagement and decision making about our current and planned activities can have a beneficial impact on our business, as well as on local communities and other key stakeholders.

Our engagement with local communities to date has been spearheaded by the Company's Managing Director Neil McDonald and our South Australian based Local Community Liaison Officer, and supported by environmental consultancy JBS&G in South Australia.

We appreciate that our continued operational success will depend on our ability to maintain a strong social licence to operate. In this respect the Company will strive to work as a trusted partner with local communities, respecting activities and seasons of local importance (eg. harvesting, summer tourism, etc), and actively managing the range of risks and opportunities associated with our field-based activities.

In the past three years we have engaged directly with local residents and business owners and also with local government in relation to our exploration activities to date, and the resultant opportunities for the community and State, both direct and indirect. In the last year or so we have held open days for the local community, been part of the indigenous Gynburra Festival in Port Victoria, and presented to an open session of the District Council of the Yorke Peninsula.

We have been very warmly received by the local community and wish to continue to work with them in good faith and with respect. We have already engaged local businesses for the supply of products and services for the work we have conducted to date around the Minlaton area on the Yorke Peninsula.

We will continue our current practice of early engagement wherever possible with our stakeholders. We aim to continue our positive working relationship and a 'no surprises' approach to manage any concerns which may arise.

Natural hydrogen and helium exploration and production has the potential for positive economic, social and environmental impacts. Access to land and the support of stakeholders is, and will always be, fundamental to the continued and sustained success of our project-related activities. We believe that regular open and transparent engagement from early in the process builds positive relationships, leads to trust, respect, and collaboration, and sets the foundation of trust and credibility for future operations.

We understand that our ongoing operations may continue to create business opportunities for the local communities in which we will be operating. We will aim to seek and prioritise those suppliers who are local and / or those that use a locally sourced workforce, products, or services in their businesses.

3.2 Native Title and Cultural Heritage

Gold Hydrogen considers native titleholders and indigenous communities as one of its core stakeholder groups. The Company will continue to engage from a position of respect for indigenous culture, traditions and cultural sites, and endeavour to foster a spirit of cooperation, with the aim of continuing to create goodwill, mutual awareness, understanding and respect.

The Company's current granted tenement PEL 687, which contains our flagship Ramsay Project, was granted by the South Australian Government free of Native Title claims. Never-the-less, we are respectful of the rights and local histories of indigenous peoples who hold a connection to certain Yorke Peninsula areas, particularly associated with coastal areas. We have engaged with the relevant traditional owner group regularly, and commissioned a Cultural Heritage survey which was undertaken as part of the comprehensive planning process for the conduct of our maiden drilling program.

Via its two wholly-owned subsidiaries White Hydrogen Australia Pty Ltd and Byrock Resources Pty Ltd, the Company holds applications for a further 67,512km² of natural hydrogen exploration licences in South Australia (refer **Figure 1** above). The Company's Managing Director Neil McDonald is personally attending to the Native Title processes associated with these application areas.

Gold Hydrogen intends to work together with other South Australian natural hydrogen exploration applicants to ensure a fair, equitable and consistent approach to Native Title agreements across industry, and across the various Native Title stakeholders.

We will aim to ensure that our employees and contractors approach culturally heritage matters with respect and a clear understanding of importance of the land to indigenous communities. We are committed to continuing to take appropriate steps to identify and reduce the effects of any unforeseen impacts from our activities on indigenous communities, land, culture, traditions and cultural sites.

3.3 Landholders and Other Stakeholders

The Company is proud of its landholder engagement process and activities to date, with initial meetings with local landowners and other stakeholders being conducted by our well-respected and experienced South Australia-based Local Community Liaison Officer.

The Gold Hydrogen team understands the responsibility associated with being a natural resource proponent in regional farming and / or tourism areas, and we are sensitive to the seasonal infrastructure usage needs of local communities. We will aim to minimise our presence and community impact during important cycles such as harvesting and / or peak summer holiday seasons. We have undertaken local community engagement and are pleased to be able to report that the feedback on our project is supportive.

We have also had multiple landholders (farming properties) enter into access agreements with us so that we can undertake our exploration activities. Along with the broader community, feedback from our ongoing discussions with landholders continues to be positive and supportive.

We have already engaged the services of a number of local contractors and suppliers. As our field-based activities increase over the next few years, we will be aiming to offer more local people employment opportunities, increase the use of local contractor and local suppliers, and support local communities and organisations more broadly wherever possible. It is important to us that we become an integral part of local communities and work to understand expectations, share information and resolve any issues as they arise.

We recognise that our future activities and our growth will bring us into contact with many new stakeholders, particularly as our application areas proceed to grant, and as our field-related activities potentially increase on a more widespread basis.

We have begun to identify and reach out to new stakeholders, and this work will continue into the future as our activities expand and develop.

Environmental Overview



4. Environmental Overview

4.1 Pollution, Waste Management and Hazardous Materials

The Company is aiming to have a zero-impact approach to pollution and wastage stemming from its project-based activities. The Company's maiden drilling and well testing campaigns took place on private land traditionally used for agriculture. This is also expected to be the case for future drilling programs. Accordingly, planning and execution of these activities incorporated detailed waste management, handling and disposal protocols by the Company and its contractors, to ensure minimal land disturbance and the ability for full rehabilitation. Third-party contractors were engaged to manage waste disposal and site rectification issues. The Company used its maiden 2023 drilling campaign to identify future opportunities for waste minimisation, recycling and reuse.

In addition, during its 2023 drilling and subsequent 2024 well-testing campaigns, the Company:

- used local contractors where possible to minimise travel times and fuel usage
- used local waste disposal services and recycling services
- where possible used new technologies to reduce oil and fuel usage.
- stayed locally, eliminating the need for a dedicated camp for our activities

4.2 Permitting and Consents

Gold Hydrogen has been fortunate to enjoy a collaborative and supportive relationship with the South Australian Government and its representatives from the Department for Energy and Mining. The Department has a clear and well-structured process for the application of various environmental and activity-related permits which the Company respects and complies with to the full extent.

Gold Hydrogen's applications for permits to work that have been submitted to date have been approved by the South Australian Department of Energy and Mining, with input from the state's Environmental Protection Agency. All conditions of all approvals have been met by the Company during the execution of its work programs.

4.3 Land Disturbance

Gold Hydrogen is focussed on the exploration and development of 'gold' hydrogen as a naturally generated, low-carbon energy source. The Company is aiming to exploit potential hydrogen-rich gas deposits accumulated and stored underground via the drilling of traditional style gas wells. Accordingly, it is not aiming to 'make' hydrogen via electrolysis, which involves both power and water usage, as well as the construction of significant infrastructure and its associated land usage (eg. for solar panels used in green hydrogen production).

The Company currently has minimal infrastructure situated at its Ramsay Project site in South Australia, following its successful maiden drilling and well testing campaigns. These activities were preceded by land surveys, Cultural Heritage clearance, landholder consultation, an environmental application and permitting process, and specific protocols around waste handling, management and disposal. The land area required for the Company's initial exploration drilling was relatively small, being approximately 100m x 100m for the drilling operation, which was then reduced to a much smaller footprint for the well testing program. Full site remediation will be undertaken for any land disturbance areas which are not part of an ongoing development or operation.

The Company will continue to strive to minimise the physical area of land impacted by its future activities, and will ensure the legal and compensatory rights of landholders are recognised at all times.



Farming recommenced on the area rehabilitated by Gold Hydrogen in halving the site footprint following the completion of drilling

4.4 Biodiversity

Gold Hydrogen is committed to continuing to ensure that its project-related activities respect and contribute positively to biodiversity conservation. We recognize that sustainable practices go hand in hand with the health of ecosystems, and we are committed to minimizing our ecological footprint wherever possible, as outlined elsewhere in this report with regard to sensitive water and land areas or uses.

As part of our field-based activity permitting processes, we will continue to ensure the conduct of environmental assessments, to be undertaken by an independent consulting firm, wherever appropriate. Furthermore, we will continue to take proactive steps to integrate biodiversity considerations into our operations in the form of environmentally sensitive site materials (eg. drilling fluid) and the diligent handling and disposal of any waste products.

Land Protection Measures



5. Land Protection Measures

5.1 Cultural Heritage

Gold Hydrogen considers native titleholders and indigenous communities to be one of its core stakeholder groups. The Company will continue to engage from a position of respect for indigenous culture, traditions and cultural sites, and will strive to continue to foster a spirit of cooperation, with the aim of creating goodwill, mutual awareness, understanding and respect.

Our approach to community and indigenous relations is respectful and participatory. We are vested in transparent, open, and effective engagement, and in building long-term sustainable relationships. Our community and stakeholder engagement approach is founded on the identification of, and consultation with, all relevant stakeholders. We listen, understand, consider, and respond to stakeholder and community views, concerns, and feedback promptly.

Gold Hydrogen's exploration work respects Cultural Heritage values. We use an avoidance strategy and ensure appropriate Cultural Heritage surveys are conducted before commencing any on-ground work which involves land disturbance. In this way, we identify cultural or heritage sites for exclusion or protection enabling us to modify our on-ground activities or to avoid those areas.

A Cultural Heritage survey which was undertaken as part of the comprehensive planning process for the conduct of our maiden drilling program.

5.2 National and State Forests

Gold Hydrogen is mindful of the existence of protected national and state park, forest, wilderness and conservation areas within its tenement and application footprint in South Australia.

A number of such areas have been specifically excised from the Company's overall tenement footprint, and the Company will continue to ensure that its land-based activities do not infringe these lands, or cause any form of pollution or disturbance in the surrounding areas. In this respect, the Company will continue to ensure that its field-based activity plans, protocols and procedures continue to include comprehensive mapping, site inspections and community consultation ahead of deployment.

5.3 Protected Flora and Fauna

Despite currently operating in areas dominated by cleared and cultivated land, the Company is committed to the identification and preservation of protected flora and fauna across its project areas. Any such protected species are expected to be identified in the conduct of ecological and environmental assessments (undertaken by an independent consulting firm) as well as comprehensive mapping processes which will be undertaken ahead of any field-based activities.

Furthermore, the Company will continue to maintain its approach of active engagement with its environmental consultants, indigenous groups and the communities in which it operates, to ensure that it continues to be aware of any localised flora and fauna sensitivities.

As outlined elsewhere in this report, the Company is exploiting potential hydrogen and / or helium rich gas deposits accumulated and stored underground via the drilling of traditional style gas wells. Accordingly, it is not expecting to occupy or disturb large areas or land, which might otherwise contain protected flora and / or fauna.

Water Protection Measures



6. Water Protection Measures

6.1 Protected Wetland Areas

Gold Hydrogen is mindful of the existence of protected wetland areas, as well as fresh and saltwater lakes within its tenement and application footprint in South Australia. A number of wetlands within South Australia which are classified under the Convention on Wetlands of International Importance (the 1971 Ramsar Convention) have been specifically excised from the Company's overall tenement footprint. Other wetland areas which are not Ramsar classified are nevertheless classified as protected under national or state guidelines.

The Company is committed to respecting all national, state and other stakeholder rights in relation to wetland areas, lakes and their surrounds, and will ensure that its land-based activities do not infringe these rights, or cause any form of contributory or upstream pollution or disturbance. In this respect, the Company will continue to ensure that its field-based activity plans, protocols and procedures include comprehensive mapping, site inspections and community consultation ahead of deployment.

6.2 Sub Surface Water

Gold Hydrogen is respectful of the communities and other stakeholders that own or use the land and any water on which it holds its exploration rights. Such stakeholders include farmers, vineyard operators and pastoralists. Sub-surface water usage may be important asset for such stakeholders, and the Company is respectful of such rights.

The Company has engaged a third party to provide a hydrogeology report which assists us in understanding sub-surface aquifers and groundwater conditions based on current data. This report concluded that currently there are no sub-surface aquifers or potable groundwater resources in our project area. As we continue to explore for hydrogen and helium we will collect additional information on sub-surface conditions. Further independent assessments will be undertaken as required.

6.3 Creeks and Rivers

There are a number of protected and classified estuary and coastal systems within South Australia which are within or border the Company's tenement footprint. Similarly, there are numerous rivers, creeks and catchments areas which the Company will also observe and respect.

The Company is committed to continuing to respect all national, state and other stakeholder rights in relation to rivers, creeks, estuary and other sensitive areas and their surrounds, and will continue to ensure that its land-based activities do not infringe these rights or cause any form of contributory or upstream pollution or disturbance. In this respect, the Company will ensure that its field-based activity plans, protocols and procedures continue to include comprehensive mapping, site inspections and community consultation ahead of deployment.

6.4 Potable Water

Gold Hydrogen is focussed on the exploration and development of 'gold' hydrogen as a naturally generated, low-carbon energy source. Accordingly, it is not aiming to 'make' hydrogen via electrolysis, which involves both power and water usage, as well as the construction of significant infrastructure and land usage (eg. for solar panels and / or wind turbines used in green hydrogen production).

Accordingly, the Company is aiming to minimise the use of potable water in all aspects of its operations. Where potable or otherwise useable water is to be used as part of its future drilling operations, the Company will maximise the amount of recycled, re-filtered and re-used water on site.

Our People



7. Our People

7.1 Diversity and Inclusion

Gold Hydrogen is committed to continuing to create an environment that respects diversity and inclusion, and attracts and retains high performing people. The Company acknowledges that sustained and inclusive economic growth can drive progress, create decent jobs for all, and maintain or improve living standards. Decent work in this regard means providing safe, engaging, and enjoyable work, opportunities to develop, ensuring work-life balance, and being appropriately recognised and rewarded.

The Company respects and values the competitive advantage of diversity (which includes but is not limited to gender, age, disability, ethnicity, marital or family status, religious or cultural background), and the benefit of its integration throughout the Company in order to improve corporate performance, increase shareholder value and maximise the probability of achievement of the Company's goals.

As the size and scale of our operations increases, we intend to continue to foster and promote an inclusive work environment where all employees, regardless of their gender or diversity, have equal opportunities to excel and contribute. By promoting diversity and inclusivity, we aim to empower people within our workforce and the communities in which we operate.

The Board has adopted a formal **Diversity and Inclusion Policy**, which is available on the Company's website under *Investor Centre / Corporate Governance*.

7.2 Workplace Health and Safety

The Company's commitment to excellence in its Core Values Statement includes the priority area of workplace health and safety, not only for its employees, but also for contractors engaged to work on its projects. The Company and its Board are also aware of the potential impact that poor workplace health and safety procedures may have on the communities and natural environments in which it operates.

Gold Hydrogen has an available suite of Occupational Health and Safety (**OH&S**) related procedures to be observed in all facets of its field-based programs, particularly those involving how our contractors and suppliers manage motor vehicle usage and high-intensity workstreams such as seismic acquisition, drilling and well-testing campaigns. The Company works with experienced professionals to develop and review these procedures, and has engaged an independent OH&S experts to oversee its drilling and well-testing campaigns. Internal managerial responsibility for this area lies with the Company's Chief Operating Officer.

Gold Hydrogen is pioneering the greenfields exploration for natural hydrogen in Australia. Accordingly, we have been actively encouraging employees and contractors to report all learnings from field-based activities (hazards, near-misses, and concerns) in order to foster an environment where individuals take ownership of their safety, and that of their colleagues and the wider communities in which we operate. Through these collective efforts, we will continue to aim to identify and address potential risks before they escalate.

As the size and scale of our activities increases, the Company is committed to bolstering its internal capacity to develop and maintain fit-for-purpose OH&S policies, procedures and reporting mechanisms to cover its workforce and / or its contractor base undertaking tasks on the Company's behalf. By creating a secure and supportive work environment, we aim to empower our employees to thrive and contribute meaningfully. Our dedication to OH&S is not just a legal obligation; it's a testament to our genuine concern for the individuals who will drive our success and the communities in which we operate. Through responsible practices, continuous improvement, and a culture of shared responsibility, we strive to uphold the highest standards of OH&S excellence.

7.3 Workplace Protection Mechanisms

The Company is committed to the continued maintenance of an organisational culture aimed at supporting our people, while balancing the rewards and benefits that its management and employees are offered in return for their performance.

It is important to the Board that the Company's people feel valued and respected whilst undertaking work of a stimulating and challenging nature within a collaborative environment.

As the size and scale of its activities increases or broadens, the Company will be striving to promote a workplace environment which embraces diversity, equity, and inclusion. In this regard, the Company has employment policies which prohibit discrimination, harassment, and bias. Furthermore, it has established and published a formal whistleblower procedure for making disclosures of information that qualify for protection under the Corporations Act or the Company's Whistleblower Policy. It applies to Directors, management and employees of the Company (and their relatives), as well as suppliers of the Company (and their employees, contractors, suppliers, consultants and service providers). Any incidents reported under the Policy are reported to the Company's Audit & Risk Management Committee.

The Board has adopted a **Whistleblower Policy**, which is available on the Company's website under *Investor Centre / Corporate Governance*.

7.4 Equitable Pay and Working Conditions

Gold Hydrogen recognises that it operates in a competitive labour market, which means it must continue to foster an environment which attracts and retains quality people. This includes not only ensuring the provision of market-based remuneration, but also providing for flexible working conditions and opportunities for career and personal growth. Gold Hydrogen has a comprehensive remuneration framework (refer Remuneration Report included in the Annual Report) which includes a range of short-term and long-term incentives to align management rewards with value accretive project-related milestones.

The Board of the Company has established a People, Culture and Resources Committee which reviews the performance and remuneration of the Company's management team. Amongst other things, the Committee is responsible for reporting and making recommendations to the Board on matters relevant to performance review metrics, corporate and project milestone achievement and industry remuneration trends, structures and guidelines.

Climate Change Initiatives and Reporting



8. Climate Change Initiatives and Reporting

8.1 Emissions Reduction Strategy

Gold Hydrogen is focussed on the exploration and development of ‘gold’ hydrogen as a naturally generated, low-carbon energy source. Accordingly, it is not aiming to ‘make’ hydrogen via electrolysis, which involves the significant usage of both power and water, as well as the construction of significant infrastructure and land usage (eg. for solar panels and / or wind turbines used in green hydrogen production).

The Company’s overall strategy is to be part of the solution to the adverse impacts associated with Climate Change and the movement towards a decreased reliance on fossil fuels, by focussing on the exploration and development of gold hydrogen as a naturally generated, low-carbon, sustainable and affordable energy source.

Wherever possible, the Company will aim to mitigate its future carbon footprint, and will seek to adopt new technologies or supply choices as they become available from third-party suppliers to assist in the areas which are likely to be the largest source of the Company’s future ‘scope reporting’ emissions (eg. contracted third-party services associated with drilling, transportation, etc).

8.2 Pollution Reduction and Recycling

The Company goal is to have a zero-impact approach to pollution and wastage in local areas connected to its project-based activities. The Company’s maiden drilling campaign took place in Q4, 2023 on private land traditionally used for agriculture. This is also expected to be the case for future drilling programs. The Company’s operating plans included detailed waste management including handling, segregation and disposal protocols by the Company and its contractors, to ensure minimal land disturbance and the ability for full rehabilitation. A third-party contractor was engaged to specifically manage waste disposal and site rectification issues. The Company used its maiden drilling campaign to identify future opportunities for waste minimisation, recycling and reuse.

From a corporate operations perspective, the Company and its personnel have embraced the concepts associated with the circular economy, and make every effort to mitigate paper usage in the office and recycle materials and general waste wherever possible. A number of the Company’s office related assets were purchased on a second-hand basis, including its office fit-out, printers, furniture and artwork.

8.3 Climate Change Reporting

The Company’s overall governance approach to Climate Change risks and opportunities occurs at Board level, guided by input from executive management. The Company’s overall strategy is to be part of the solution to the adverse impacts associated with Climate Change, and the movement towards decreased reliance on fossil fuels, by focussing on the exploration and development of ‘gold’ hydrogen as a naturally generated, low-carbon, sustainable and affordable energy source.

The Company has a Sustainability Policy, and has produced this 2024 Sustainability Report to be released at the same time as its 2024 Annual Report.

The Company does not consider that it currently has any adverse material exposure to the risks associated with Climate Change. Accordingly, the Company does not consider it necessary to reflect any financial impact associated with Climate Change risks in its financial statements. Conversely, the Company sees a range of opportunities associated with the broad industrial, societal and regulatory changes influenced by Climate Change, which support its strategic objectives and its future business plans.

The Company considers the following matters relevant to this conclusion, as recommended under TCFD (the Taskforce on Climate-related Financial Disclosure) guidelines:

Climate Change Risks - Transition Risks

Policy and Legal Risks

Gold Hydrogen is not part of the fossil fuel industry. The Company's primary business objectives are focussed on assisting with the decarbonisation of the Australian and global economies via the use of hydrogen as an alternative and low carbon energy source to fossil fuels, and the use of non-fossil fuel helium for the domestic Australian market. The Company does not consider that it is likely to be subjected to national or international policy actions that will have an adverse impact on its business or project objectives.

Technology Risk

Whilst some elements of downstream technology risk may currently exist for the transportation and delivery of hydrogen across the industry in general, the Company does not consider this will represent a material adverse risk for its business. This is because all of the organisations currently involved in the hydrogen industry are aligned in working towards solutions for the transportation and delivery of hydrogen to various markets, including by pipeline, road, rail and shipping transportation.

The Company is already actively collaborating with governments, research institutions, local communities, and industry stakeholders to foster knowledge exchange, share best practices, and collectively work towards a sustainable future. By fostering these partnerships, we aim to leverage diverse expertise and resources to accelerate the adoption of natural hydrogen and advance sustainable development on an international basis.

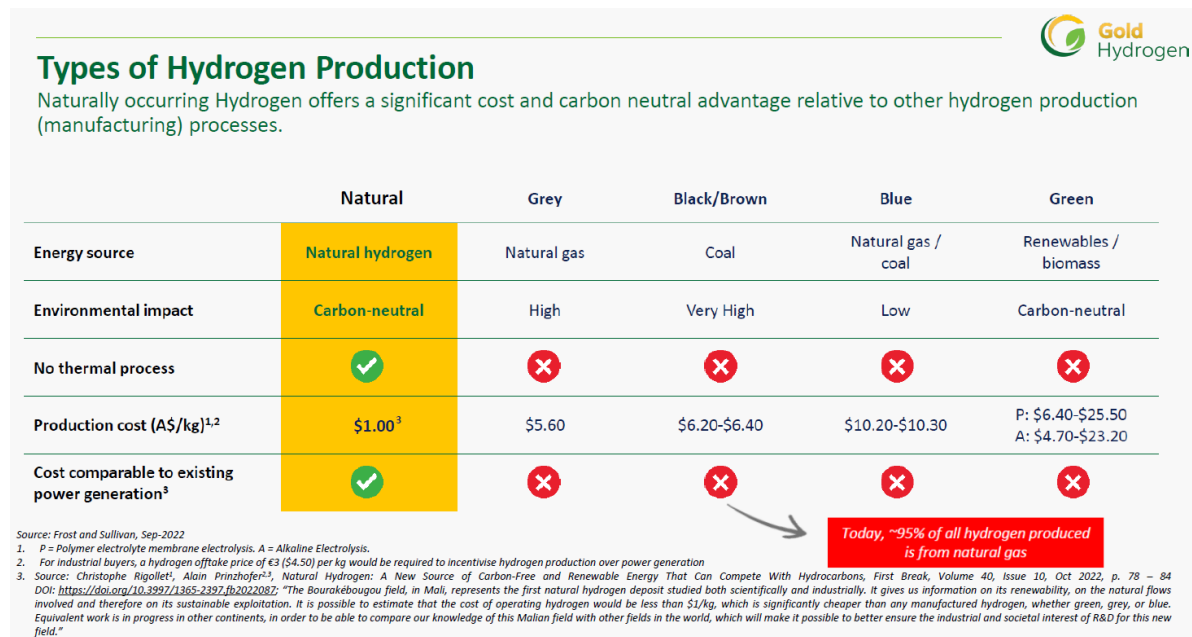
Furthermore, the Company's focus on natural hydrogen means that it does not have to 'make' hydrogen (with the varying costs and infrastructure needs associated therewith) or store hydrogen once made (as natural hydrogen is already 'made' via natural processes, and is already stored underground).

Market Risk

Gold Hydrogen is not part of the fossil fuel industry. The Company's primary business objectives are focussed on assisting with the decarbonisation of the Australian and global economies via the use of natural hydrogen as an alternative and low carbon energy source to fossil fuels. Accordingly, the Company does not consider that it is likely to be subjected to national or international market risk, particularly having regard to the range of independent experts forecasting the future demand for hydrogen and hydrogen-related products and by-products (eg. ammonia, fertiliser, etc) as outlined elsewhere in this report.

Furthermore, with helium also encountered during the drilling of the Company's first two exploration wells, the opportunity exists to capitalise on an emerging 'green helium' market (ie. helium not generated in conjunction with a fossil fuel development) as part of the Company's future plans.

From a commodity pricing perspective, the Company believes it will have a sustainable cost advantage once in production phase, as illustrated by **Figure 3** below:



Cost comparison for hydrogen types

Reputational Risk

As the Company is focussed on assisting with the development and delivery of naturally generated hydrogen as an alternative and low carbon energy source to fossil fuels, it does not consider itself to be likely to be subjected to adverse corporate reputational risk. Gold Hydrogen is not part of the fossil fuel industry. Conversely, as part of the new energy economy and as a potential contributor to global and national decarbonisation, the Company believes that its reputation will be positively impacted upon the delivery of successful project outcomes.

The Company is mindful of its role in pioneering the greenfields exploration for natural hydrogen systems in Australia, and will be aiming to ensure that all of its activities continue to be formulated and undertaken in a socially and environmentally responsible, safe and sustainable manner.

Climate Change Risks - Physical Risks

The Company currently has minimal infrastructure situated at its project site in South Australia, and is therefore not directly impacted in a material sense by any of the physical risks generally associated with Climate Change (fire, flood, rising temperatures, etc). Furthermore, even when the Company is at the stage of having natural hydrogen gas production facilities, the physical infrastructure footprints are expected to be relatively small and unintrusive.

The Company intends to work with engineers and other industry experts (directly or via partnerships or alliances) to ensure that any infrastructure ultimately constructed (eg. pipework, gas separators, etc) not only minimises its impact on the surrounding environments, but is resilient to the potential physical impacts associated with Climate Change.

Climate Change Opportunities

Resource Efficiency

The Company is primarily focussed on the exploration and development of 'gold' hydrogen as a naturally generated, low-carbon energy source. Accordingly, it is not aiming to 'make' hydrogen via electrolysis, which involves both power and water usage, as well as the construction of significant infrastructure and land usage (eg. for solar panels used in green hydrogen production). Natural hydrogen has already been 'made' (via natural processes such as hydrolysis) and has already been 'stored' underground. The Company is essentially aiming to 'unlock' this existing source of hydrogen via traditional gas drilling and extraction techniques.

Energy Source

The Company is aiming to become a producer and supplier of low carbon energy via the exploration and development of natural hydrogen gas resources, in concert with the global push to decarbonise and ultimately phase out fossil fuel usage. The Company expects demand for this energy source to increase over time, as part of the global push for the reduction of carbon emissions and the decrease in reliance on fossil fuels (see also *Markets* below).

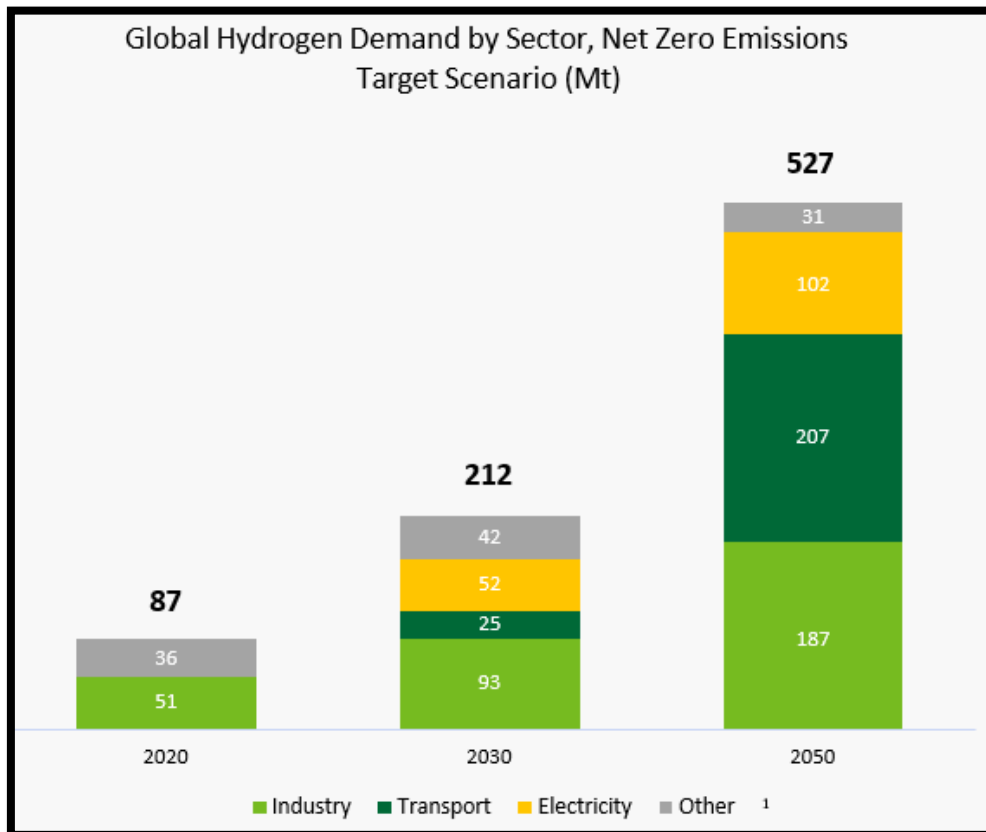
Products and Services

The Company's overall strategy is to be part of the solution to the adverse impacts associated with Climate Change and the movement towards decreased reliance on fossil fuels, by primarily focussing on the exploration and development of 'gold' hydrogen as a naturally generated, low-carbon, sustainable and affordable energy source.

Markets

As outlined in the Frost and Sullivan Industry Report which was included in the Gold Hydrogen Replacement Prospectus of 29 November 2022:

- (i) the global demand for hydrogen grew by 50% between 2000 and 2020;
- (ii) in the 'net zero emissions by 2050' scenario, hydrogen is forecast to grow from 90Mt in 2020 to over 200Mt by 2030. This forecast assumes that by 2030, the average global blend of hydrogen with natural gas in gas networks is expected to be 15% of hydrogen in volumetric terms, thus reducing CO₂ emissions from gas consumption by around 6%;
- (iii) By 2030, it is assumed that over 15 million hydrogen FCEVs will be on the road globally;
- (iv) By 2050, the forecast for global hydrogen consumption reaches close to 530 Mt. This 2050 estimate assumes that hydrogen-based fuels will provide over 60% of total fuel consumption in shipping by that year.



Forecast global hydrogen demand by sector

Resilience

The Company believes that its natural hydrogen and related downstream and by-products will ultimately have the potential to support the resilience of a number of potentially susceptible industries including the steel production, transportation, agriculture and power generation industries.