



Hydrogen
Society
of Australia

Looking backwards, looking forward!

Hydrogen is marching on – will you join us?

In this month's email....

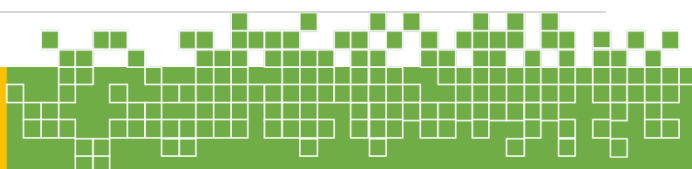
- Message from the HSA Steering Committee
- Upcoming HSA Events
 - ✓ H2 World Webinar Series (Modules 10 and 11)
 - ✓ National Hydrogen Day
 - ✓ World Renewable Energy Congress (Workshops and training)
- Update on the HSA Website upgrade and Members Only Portal
- Members in Spotlight – Hydrogen Safety and Risk Management
- Upcoming Training – Safety and Risk Management, Standards and Regulations
- Upcoming External Events / other external links
- Snippets of Hydrogen making moves around the world
- We acknowledge the support of our corporate members!

Message from the HSA Steering Committee

As foreshadowed in our previous newsletters, we are continuing to pursue a number of key initiatives to add value to our membership. We have upgraded our website to include a members' only portal, designed to facilitate networking and provide a store of knowledge. We have recently launched the members networking group on LinkedIn. Some of the functionality and content is still under construction, and we would welcome members comments and inputs as we proceed with the upgrade. Not yet a member? Why should you join the HSA, with our new features coming up in the next few months?

- As a **recruiter**, you will access a database of professionals working in the hydrogen space, with a broad range of skills and expertise.
- As a **student** and **young professional**, you will access a network of well-established experts in the hydrogen space in Australia, with free or discounted training material and conference opportunities.
- As a **hydrogen industry expert**, you will promote your company through our regular webinars and newsletters, with your company listed on our database.
- As a **member of the public**, you will broaden your knowledge in hydrogen, and access premium contents such as webinars, interviews, member database and so much more!

Consider joining the HSA to get access to free or discounted events, training material and the latest information in the hydrogen space – [become a member](#).



Upcoming HSA Event – H2 World Webinar Series

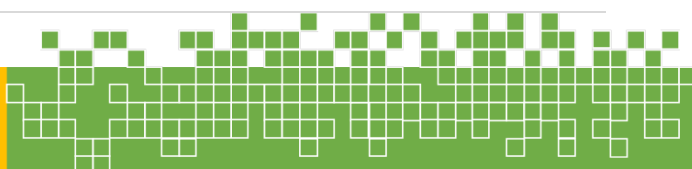
The successful rollout of the Hydrogen Society of Australia and Clariden Global collaboration web series H2 World is continuing. Content will include presentations from the **3rd Hydrogen Production, Storage, and Infrastructure Development Global Summit (2022)**, updates from respective presenters and experts, live QnA sessions, as well as networking opportunities. The first nine modules have been successfully delivered to our members, and recordings of these are now available on our members only portal in the [Knowledge Centre under Video Content](#). Login to your members portal for easy access to the following links.

Upcoming

- **Module 11 – Save the date** for 17 August online webinar starting at 15:00 AWST [17:00 AEST]. Our eleventh module will feature a recorded presentation **Large Scale Water Electrolysis and Green Ammonia Technologies**, delivered by Karan Bagga (CTO & Director, Thyssenkrupp Udhe Australia). Following this recorded presentation, Karan will join us online to provide an update and undertake a short QnA with the audience. An in person networking event will be hosted by QUT. Registration will soon be open.
- **Module 10 – Register now** for 03 August online webinar starting at 15:00 AWST [17:00 AEST]. Our tenth module will feature a recorded presentation **The Hydrogen Energy Supply Chain (HESC) Project in Gippsland Victoria: World’s First Integrated Liquid Hydrogen Supply Chain**, delivered by Jeremy Stone (non-Executive Director & Advisor, J-Power Latrobe Valley). Following this recorded presentation, Jeremy will join us online to provide an update and undertake a QnA session with the audience. [Click here to find out more and register.](#)

Delivered

- **Module 9** on 20 July: **Oz Mineral Case Study: Safe, Scalable, Hydrogen Storage** delivered by Mark Rheinblander (Founder and CEO of Carbon280). **Recording available soon**
- **Module 8** on 06 July: **Developing Utility Scale Bankable Solar and Hydrogen Projects** delivered by Muren Guler (Managing Partner of Venn Energy). [Watch recording here.](#)
- **Module 7** on 22 June: **Large Scale, Low Cost Compressed Hydrogen Storage – the Missing Link to a Green Hydrogen Future**, delivered by David Bentley (CEO of Ardent Underground Hydrogen Storage). David joined us online to provide an update and undertake a short QnA with the audience. [Watch recording here.](#)
- **Module 6** on 08 June: **Green Hydrogen in Mining and Refining** delivered by Sreeraj Balachandran (Principal Decarbonisation at RioTinto). [Watch recording here.](#)
- **Module 5** on 25 May: **Enabling Large-Scale Hydrogen in Underground in Preparation for Australia to be the Largest Hydrogen Exporter** delivered by Dr. Matthias Raab (CEO CO2CRC). Matthias joined us online to provide the latest news on these projects and undertake a QnA session with the audience. [Watch recording here.](#)
- **Module 4** on 11 May: **Green Hydrogen & Ammonia - Scaling Up Commercialization** delivered by Dr. Attilio Pigneri (Founder and CEO H2U - The Hydrogen Utility). An in-person networking event was hosted by the University of Queensland. [Watch recording here.](#)
- **Module 3** on 27 April: **Renewable Hydrogen Technology Demonstration in Canberra - A Case Study of Australia's First Public Hydrogen Refuelling Station** delivered by Daniel Harding (Executive Branch Manager - Climate Change and Energy Division, Environment, Planning and Sustainable Development Directorate, ACT Government). [Watch recording here.](#)



- **Module 2** on 13 April: **Port Kembla Case Study: Australia's First Hydrogen - Powered Trucks and Refueling Station In Decarbonizing The Freight Industry** delivered by Alan Watkins (Executive General Manager at Coregas). Wodek Jakubik (Innovation Manager at Coregas) joined us online to provide an update and undertook a QnA session with the audience. [Watch recording here.](#)
- **Module 1** on 30 March: **How ATCO is Blending Hydrogen into the Gas Network** delivered by Kapz Malhotra (ATCO's General Manager of Engineering Projects). Following his pre-recorded presentation, Kapz joined us online to provide an update and Q&A. [Watch recording here.](#)

Upcoming HSA Event – National Hydrogen Day 2022 – October 08

2022 is the 4th year of the celebration of Hydrogen Day in Australia. The United States, with the support of the US Department of Energy, has celebrated the date each year since 2015. October 8 aligns with the atomic weight of hydrogen ~1.008.

This year, the Hydrogen Society is planning to mark the day in Perth, Brisbane, Sydney and Melbourne. In Perth, it will be in collaboration with Murdoch University and other partners. We are currently pulling together the program with speakers and sponsors. This event plan will engage school/university students, industry, professionals, academics, and government in the future of hydrogen. Speakers from government, industry, research organisations, and students will outline the status and future strategy for the hydrogen industry. In addition, there will be an exhibition of hydrogen industry and hub developments, research projects, and a hydrogen-themed students' poster competition to facilitate engagement and collaboration.

Please get in touch with us if you want to be part of this event or can help pull it together. contact@hydrogensociety.org.au.

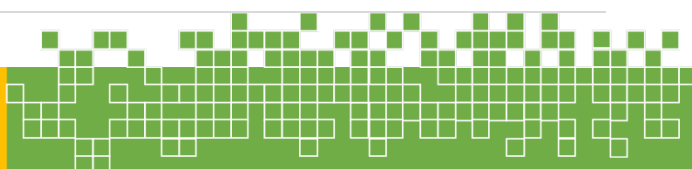
Upcoming HSA Event - World Renewable Energy Congress XXI – December 4th to 9th

The Hydrogen Society of Australia (HSA) is a Supporter of the [World Renewable Energy Congress XXI](#) to be held at Murdoch University in Perth Western Australia from 4th to 9th December 2022. The source and nature of energy, the security of supply and equity of distribution, the environmental impact of its supply and utilization, are all crucial matters to be addressed by suppliers, consumers, governments, industry, academia, and financial institutions. In addition to the traditional common and parallel session format, the conference will be offering several workshops relating to specific research, industry and policy issues.

As a Conference Supporter, the HSA will be organising two events on Sunday 4th December.

HSA Short Course: “The Hydrogen Economy and Technology”. Covers the four main areas of the hydrogen economy: generation, storage, transport, and utilisation. Several aspects of each of the areas will be presented and discussed. The presenters will be recognised leaders in industry and academia who are abreast of the most current status of each area, concluding with a moderated discussion with the experts. [Click here for further details.](#)

HSA Workshop: The workshop will run on the afternoon of Sunday 4 December, where hydrogen experts and industry leaders will be invited to present their developments and projects. The workshop will be followed by project demos discussed during the sessions.



Online registration will be available soon on the [WREC2022 website](#) (Early bird registration will be open until 18 September 2022). **HSA members will receive a discount.**

Update on our Website Upgrade and Members Only Portal

Based on our membership feedback, we have updated the HSA website to include a members' only portal which will provide the following features:

- [a networking and collaboration platform](#), to connect and communicate with other members and the HSA community [**just released**];
- [a database portal](#), which contains links to government departments and hydrogen clusters around the country [**live and ongoing**];
- [a knowledge portal](#), which contains an archive of recordings and PowerPoint presentations [**live and ongoing**];
- [a jobs board for academic and employment opportunities](#) in the hydrogen sector [**live and ongoing**];
- a register of skills and expertise in the hydrogen supply chain [**under construction**].

The website upgrade is a work in progress, with some of the pages still under construction. We welcome your feedback and suggestions regarding content and user experience.

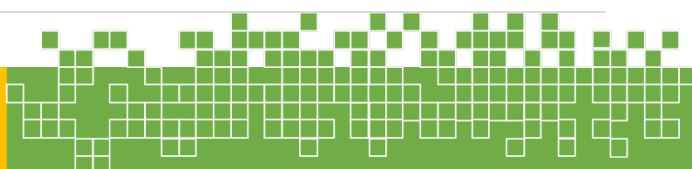
Members in Spotlight:

Hydrogen Safety and Risk Management

A personal perspective from Fiona Mitchell-Corbett, Vice President Hydrogen Safety at Gexcon

What do we know about hydrogen safety? Well, hydrogen has been used in industrial applications such as oil refining, chemicals, and production of iron and steel for decades so a reasonable answer could be that we know plenty about hydrogen safety. And to some extent, this is true, there is a considerable amount of knowledge and experience within industry and academia on hydrogen safety. Furthermore, thanks to dedicated hydrogen safety industry groups such as the Centre for Hydrogen Safety and HySafe, there is increasing collaboration to promote the safe use of hydrogen as the world looks to significantly increase the role of hydrogen as a clean(er) energy solution. However, it would be remiss to suggest that hydrogen safety is completely in hand and that we can progress with the current momentum for hydrogen relying on existing standards and practices only.

The proposed new applications of hydrogen are many and varied and some deviate significantly from the current role of hydrogen in industry. As such, we need to be mindful and consider the true hazards associated with new and expanded hydrogen applications so that the risk can be appropriately managed. Let's be clear though - this isn't about 'gold-plating' safety requirements or introducing unnecessary conservatism into designs that are costly and impractical— this is about ensuring that suitable and scalable risk management frameworks are used to ensure that the hazards associated with hydrogen are identified, understood, and then managed appropriately. In this respect, there is still plenty of work to be done and it is pleasing to see the many initiatives and research focuses in this area. The [SAFEN \(Safe Energy Carriers\) joint industry innovation project](#) is a great example of industry collaboration to investigate and refine our



understanding of the hazards associated with hydrogen, and other energy carriers. Gexcon is pleased to be a founding member of this project and work with our project partners to deliver this important work.

And while the use of hydrogen can be said to have a reasonably good track record of safety, I'd encourage you all to check out the [Hydrogen Incidents Database](#) and review some hydrogen incidents that have occurred. I challenge everyone to learn something new about hydrogen from these incidents and then take this knowledge away and apply it to your area of work within the hydrogen industry. The database has a wealth of information about hydrogen incidents with a focus on promoting knowledge sharing and learning from these incidents to support greater hydrogen safety awareness. The database is free to access and is hosted within the Hydrogen Tools Portal which is built and maintained by the Pacific Northwest National Laboratory with funding from the DOE Office of Energy Efficiency and Renewable Energy's Hydrogen and Fuel Cell Technologies Office. These databases are also included in our [HSA Members Only Database Portal](#) for ease of access.

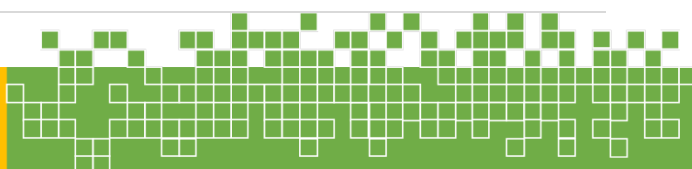
Hydrogen Safety and Risk Management Training Course – Thursday 24 August

The Hydrogen Society of Australia is collaborating with **GEXCON** and **Integrated Energy** to deliver a half day basic training course in hydrogen safety and risk management for HSA members and non-members. The course is targeted for professionals with a technical background who are looking to broaden their skill set into the hydrogen space. The first two hours will consist of a general introduction to the hydrogen ecosystem followed by hydrogen safety and risk management, delivered by the specialist team in Gexcon (Fiona Mitchell-Corbett and Derek Cross). Following networking over morning tea, the next hour will be focused on regulations and standards, delivered by David Cavanagh (Managing Director of Integrated Energy, and Chief Hydrogen Officer of Hydrogen West and Hydrogen East). The event will close at 13:00 following a networking session over a light lunch. This face-to-face interactive training course will have limited seating, [so click here for more information and secure your place](#). **HSA members will receive a 20 percent discount**. Thanks to our Enterprise Supporter Liberty Flexible Workspaces who will provide the training facilities at no charge.

Upcoming External Events (with HSA as a supporting partner/endorsing association)

2nd Connecting Green Hydrogen APAC 2022 - July 25th and 26th (Melbourne)

The Hydrogen Society of Australia has partnered with the organisers of one of the largest hydrogen conferences in APAC to be held in Melbourne on July 25 and 26. A landmark event in the industry's calendar, [Connecting Green Hydrogen APAC 2022](#) will bring together the industry live and in-person to discuss the green hydrogen agenda in Australia and Asia Pacific. Connecting Green Hydrogen APAC 2022 creates a unique set-up where the policy-makers as well as both local and international developers, investors, experts and solution/product providers, meet, get market updates, debate, and learn. Attending the event is an enabler to be part of the future development of hydrogen energy in APAC. Luke Price (Commercial Advisor at CO2CRC, an Enterprise Supporter of HSA) will be Chairing Day 2 (H2TECH). David Cavanagh (Integrated Energy and Hydrogen West, also an Enterprise Supporter of HSA) will be chairing the session *Scaling Up Green Hydrogen Applications – How to Advance Storage and Distribution Innovation*.



There is a **20% discount for members of HSA** (contact our membership team on contact@hydrogensociety.org.au to obtain the membership discount code): [Click here to register](#)

Hydrogen Connect Summit 2022 - September 8-9 (Brisbane)

MCI is partnering with H2Q (Queensland Hydrogen Industry Group) to build the inaugural Hydrogen Connect Summit, and HSA will be supporting this summit as an **Endorsing Association**. The Summit will be held at the Brisbane Convention & Exhibition Centre on 8-9 Sep 2022 with QLD Government as the Principal Sponsor on the event. The event is being designed to connect all the key players and facilitate deal-making in the rapidly expanding hydrogen industry. David Cavanagh (Integrated Energy and Hydrogen West, HSA Enterprise Supporters) will be chairing the panel discussion on Day 1: *Growing Domestic Demand to Fuel Australia's Green Hydrogen Revolution*. **The cost for delegate registration is discounted for members of HSA.** [Click here for further details and registration.](#)

Critical Minerals and Energy Investment – September 28 -29 (Perth)

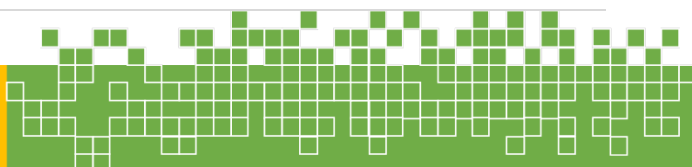
Critical Minerals & Energy Investment Conference and Exhibition takes place on 28-29 September 2022 in Perth, Australia. This event focuses on critical minerals, raw materials strategy, sourcing and processing, green investment economy, as well as hydrogen that plays a crucial role in the global energy market's transition to a low-carbon economy. We are highlighting the growing importance and role critical minerals play in clean energy transition, sustainment of the digital world, critical infrastructure, transport and defence and security. For the 2022 edition, we are including Asia, Africa and the Americas in addition to coverage of Europe and Australia. It's a hybrid event and we are proudly supported by the Government of Western Australia. [Click here for further details and registration](#)

17th International Symposium on Metal-Hydrogen Systems (MH2022) - 2022 Oct 30 to Nov 04 (Perth)

MH2022 is an International Symposium on Hydrogen that is held every two years at international venues around the world, and in 2022 we are expecting a large number of both International and National attendees, approximately 400 delegates. Although focussing on hydrogen storage, the Symposium program covers all areas of hydrogen such as production, storage, distribution and utilisation. The International Symposium runs over 5 days and a MH2022 Summer School will be held over 2 days prior to the Symposium (total length of Symposium + Summer School = 7 days). Craig Buckley (HSA Steering Committee member) will be chairing this conference and the HSA will be supporting this International Symposium as an Endorsing Partner, with **discounted registration fees for HSA Members**. More information on <https://www.metal-hydrogen2022.com/>.

Global Hydrogen Energy Meet: Positioning Hydrogen 2022 - November 21st to 23rd

This three-day conference will be held in Melbourne from 21 to 23 November 2022. One of the objectives of this conference is to highlight Australia's potential as a "green" hydrogen superpower. Positioning Hydrogen 2022 will be a closed door B2B event for international industry leaders and key decision-makers from across the value chain for exchanging valuable insights, building and fostering business relationships, and driving forward innovation and collaboration within the industry. HSA will be supporting this summit as an Endorsing Association and **there is a 20% discount for members of HSA** (contact our membership team on



contact@hydrogensociety.org.au to obtain the membership discount code). [Click here for further details.](#)

Snippets of Hydrogen making moves around the world

2022 06 17_Green hydrogen could further Infinity's clean lithium ambitions_Stockhead: Infinity Lithium (ASX:INF) is looking to use green hydrogen in its lithium conversion process instead of natural gas, which will reduce its carbon emissions. As part of this drive, Infinity executed an MoU with global leading engineering firm Thyssenkrupp Industrial Solutions AG BU Mining in December last year to assess the potential to use green hydrogen to power the calciner at its San Jose lithium project in Spain. Green hydrogen could also be used to power other energy applications on site.

<https://stockhead.com.au/resources/green-hydrogen-could-further-infinitys-clean-lithium-ambitions/>

2022 07 04_Progress update for WAH2 Hydrogen project_Hexagon Shareholder Update: Progress continues on Hexagon's WAH2 Hydrogen project, with focus on securing gas supply for blue hydrogen feedstock; Securing land for site location in the Company's preferred NW Coast of Western Australia; Progressing agreements around access to CO2 sequestration capacity; Strategic conversations with offshore customers / funding partners. <https://hxenergymaterials.com.au/wp-content/uploads/2022/07/Progress-update-for-McIntosh-Nickel-PGE-and-WAH2-Hydrogen.pdf>

2022 07 06_ASX Renewable Energy Stocks_Stockhead: More than 3GW of battery storage projects with a combined value of \$3.7b have been shortlisted for government funding through the Australian Renewable Agency (ARENA) from a pool of 54 expressions of interests. Elixer Energy (ASX:EXR) has entered into an MoU with SB Energy Corp over a green hydrogen project in Mongolia.

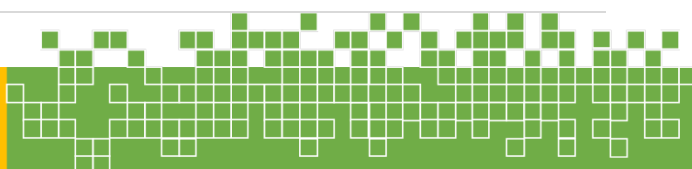
<https://stockhead.com.au/energy/asx-renewable-energy-stocks-12-projects-with-more-than-3gw-of-battery-storage-compete-for-arena-funding/>

2022 07 11_ABC News: Prime Minister pitches to restore Australia's climate reputation at Sydney Energy Forum ahead of Pacific Islands Forum. <https://www.abc.net.au/news/2022-07-11/prime-minister-pitches-to-restore-australia-s-climate-reputation/101228704>

2022 07 14_How Pure Hydrogen is paving the way in the creation of Australia's hydrogen ecosystem: ASX clean energy company Pure Hydrogen (ASX:PH2) has been progressing well with its strategy to build a diversified clean energy business comprised of three main verticals – hydrogen gas operations, natural gas operations and hydrogen fuel cell technology (see: ASX Announcement, July 7 2022).

<https://acapmag.com.au/2022/07/how-pure-hydrogen-is-paving-the-way-in-creation-of-australias-hydrogen-ecosystem/>

2022 07 14_ Albanese just laid out a radical new vision for Australia in the region: clean energy exporter and green manufacturer_The Conversation: Since Labor took office, we've heard a lot about our future as a renewables superpower. Often overlooked is the fact this would mean not just generating renewable electricity and green hydrogen at vast scale but also investing in new industries and processes to grasp as



many opportunities as we can. This would mean investing in upstream industries such as solar array fabrication and electrolyser manufacture, as well as downstream industries such as green steel, green cement and green fertiliser. <https://theconversation.com/albanese-just-laid-out-a-radical-new-vision-for-australia-in-the-region-clean-energy-exporter-and-green-manufacturer-186815>

2022 07 16_ BP takes operatorship of the Asian Renewable Energy Hub_EnergyClubWA: BP has acquired a 40.5 percent equity stake in the Asian Renewable Energy Hub, one of the largest renewable and green hydrogen energy hubs in the world, and took over as operator on July 1. The AREH in the Pilbara aims to develop onshore wind and solar power generation of up to 26 gigawatts, or 90 terawatt hours per year, of green energy; almost a third of all electricity generated in Australia in 2020. Project partners for AREH include InterContinental Energy, CWP Global, and Macquarie Capital and Macquarie's Green Investment Group, with 26.4 per cent, 17.8 per cent, and 15.3 percent equity stakes respectively. <https://www.energyclubwa.org.au/email/ea49e47d-5fae-40d1-9341-b3d8423c7def/1b3a64cd-1b65-4195-b37c-899230abff17>

We acknowledge the support of our corporate members!

[Click here to find out more about their technical services and corporate offerings in the hydrogen space.](#)

- Innovate Australia
- BE&R Consulting
- Good Water Energy Ltd
- Hydrogen Energy Pty Ltd
- Polish Investment and Trade
- CO2CRC
- Edith Cowan University
- Queensland University of Technology
- Integrated Energy Pty Ltd
- Truck Centre WA
- Environmental Engineers International
- Gexcon
- Hyzon

We are all in this together...

Please share this newsletter with your network, as they may be interested in joining the HSA.

Together we can foster a hydrogen society for Australia and a global renewable energy future.

Hydrogen is marching on - will you march with us?

<https://hydrogensociety.org.au/>

Contacts



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