Newsletter 2022 June 13



Looking backwards, looking forward!

Hydrogen is marching on - will you join us?

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Message from the HSA Steering Committee

As foreshadowed in our previous newletters, 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 Opportunities Page, which highlights academic and employment opportunities. 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.
- 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 – <u>become a member</u>.



Upcoming Events – 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. We expect to deliver between ten and twelve modules over a six month period. The first six modules have been successfully delivered to our members, and recordings of these are now available on our members only portal in the <u>Knowledge Centre under</u> <u>Video Content</u>. Login to your members portal for easy access to the following links.

Upcoming

Module 7 – Register now for 22 June online webinar starting at 15:00 AWST [17:00 AEST]. Our seventh module will feature a recorded presentation on 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). Following this recorded presentation, David will join us online to provide an update and undertake a short QnA with the audience. Click here to find out more and register

Delivered

- Module 6 Delivered on 08 June online webinar at 12:00pm AWST [14:00 AEST]. Our sixth
 module featured a recorded presentation on Green Hydrogen in Mining and Refining delivered by
 Sreeraj Balachandran (Principal Decarbonisation at RioTinto). Watch recording here.
- Module 5 Delivered on 25 May at 15:00 AWST: Our fifth module featured a pre-recorded presentation on Enabling Large-Scale Hydrogen in Underground in Preparation for Australia to be the Largest Hydrogen Exporter delivered by Dr. Matthias Raab CEO CO2CRC. Following this recorded presentation, Matthias joined us online to provide the latest news on these projects and undertake a short QnA with the audience. Watch recording here
- Module 4 Delivered on 11 May online at 14:30 AWST: Our fourth module featured a recorded presentation on 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 Delivered on 27 April at 12:00AWST: Our third module featured a pre-recorded presentation on 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 Delivered on 13 April: Our second module featured Alan Watkins (Executive General Manager at Coregas) presenting on the "Port Kembla Case Study: Australia's First Hydrogen Powered Trucks and Refueling Station In Decarbonizing The Freight Industry". Following Alan's recorded presentation, Wodek Jakubik (Innovation Manager at Coregas) joined us online to provide an update and undertook a short QnA with the audience. Watch recording here.
- Module 1 Delivered on 30 March: Our first module featured Kapz Malhotra (ATCO's General Manager of Engineering Projects) providing unique insights into "How ATCO is Blending Hydrogen into the Gas Network". Watch recording here.

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 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 networking and collaboration platform [under construction];
- 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:

Interview with Dr Quentin Meyer

Dr Quentin Meyer is an active Steering Committee member of the Hydrogen Society of Australia. Quentin is a Research Associate at the University of New South Wales in Sydney, Australia, where he focuses his studies on hydrogen fuel cells, renewable power sources, and electrochemistry. With over 39 published papers under his belt, and a runner-up prize for Young Electrochemist of the Year 2021 from EDRACI, he is proving himself to be an incredibly formidable researcher. Quentin was recently interviewed by <a href="https://documents.org/linearing-new-normalized-new-normali

Quentin began his academic career in 2011 when he started his PhD at University College London in the Electrochemical Innovation Lab. Today, Quentin is engaging with new avenues of research at the University of New South Wales. "Right now, I am trying to raise funding for a new type of fuel cell catalyst in the University of New South Wales (Sydney, Australia) in the NanoElectrochemistry Lab of Prof Chuan Zhao. These days, commercial hydrogen fuel cells use platinum, because their performance and durability is really high, somewhere between five to twenty thousand hours. But obviously, platinum is also one of the most expensive metals on the planet —so it doesn't really make sense in the long run". "What we are trying to do is find a low-cost alternative that will deliver similar performance and

"What we are trying to do is find a low-cost alternative that will deliver similar performance and durability. That's not going to happen overnight, and there is a lot of active research in this field. It's challenging, it's exciting and eventually we will get there."

<u>Click here for the full interview on our members portal</u> (**The Hydrogen Standard Issue 3** pages 15, 16, and 17).



Snippets of Hydrogen making moves around the world...

2022 05 12 Meet the Top Guns that have Aviation H2 Soaring Stockhead: After inking a strategic partnership with major aircraft charter operator, FalconAir, and completing their feasibility study, Aviation H2 is on track to have Australia's first hydrogen-powered plane in the sky midway way through 2023.

2022 05 13 ASX Renewable Energy Stocks Stockhead: Fortescue Metals Group's green machine, Fortescue Future Industries, is looking to give ageing coal plants an extreme makeover – this time focusing on repurposing coal infrastructure for green hydrogen production in North America.

2022 05 23 ASX Renewable Energy Stocks Australia rejoins key trading partners as Alboresets for 2030 emissions target Stockhead: Newly elected Prime Minister Anthony Albanese has vowed to make Australia a renewable energy 'superpower'. An allocation of up to \$3 billion from Labor's National Reconstruction Fund has also been set out to invest in green metals (steel, alumina and aluminium), clean energy component manufacturing, hydrogen electrolysers and fuel switching, agricultural methane reduction and waste reduction.

2022 05 25 Modular AWE hydrogen production boosts Frontier to Best-in-Show Stockhead: Frontier Energy says its modular alkaline water electrolysis (AWE) is the preferred tech to produce green hydrogen at its Bristol Springs Solar (BSS) Project due to its lower cost and technical robustness compared to other currently available technologies.

<u>2022 05 30 Waste to clean hydrogen without the burn Stockhead:</u> Patriot Hydrogen has been making solid progress in its goal of producing modular, off-the shelf pyrolysis systems that take waste biomass and convert it into clean energy.

2022 06 01 WA Police Force E-Vehicle Trial Western Australia Police Force: Two E-Vehicles are about to be trialled by the WA Police Force for potential future frontline policing applications (a Hyundai Ioniq 5 electric vehicle and a Toyota Mirai hydrogen fuel cell electric vehicle).

<u>2022 06 02 Houston as the epicentre of a global clean-hydrogen hub McKinsey: Clean hydrogen is emerging as a viable way to reach net zero. In the United States, clean-hydrogen efforts in Houston, Texas, could serve as a template for other regions.</u>



Events in the Hydrogen Space

The Future of Clean Energy - What does Western Australia's energy future look like? - June 24 (Perth)

Hydrogen, Ammonia, Lithium, Natural Gas – all are part of the discussion about WA's energy future. But there's an enormous challenge ahead for our state to reach net zero by 2050, and to transition our industries. What will it cost, how quickly should it happen, and who should lead the process? WA is an energy powerhouse, and the state needs to be ready for a change, even if we don't yet know how it will look. The WA Business News Event over lunch includes keynote speakers followed by a panel discussion over whether Western Australia can become a world leader in the new global clean energy industry, and what it will take to get there. Click here for further details and registration

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. The cost for delegate registration is discounted for members of HSA. Click here for further details and registration.

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 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. The Summit program is due for release in early May. <u>Click here for further details and registration</u>

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 2022 edition, we are including Asia, Africa and 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

International Hydrogen and Fuel Cell Day 2022 - October 08 (Perth)

For the third time, the Hydrogen Society of Australia will be hosting the International Hydrogen and Fuel Cell Day, in collaboration with Murdoch University. This will be a family centric event, featuring demonstrations of hydrogen fuel cells and electric vehicles. Further details will be forthcoming.

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 has been invited to support this International Symposium as a sponsor. 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). Early bird registration closes before June 30. Click here for further details

World Renewable Energy Congress XXI (Murdoch University) - 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 Supporter, the HSA will be organising two events on the 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 could be followed by project demos discussed during the sessions.

Online registration will be available soon on the <u>WREC2022 website</u> (Early bird registration will be open until 15 August 2022)

For other upcoming events within the hydrogen space, check out the non-HSA events page here.

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

- 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







LEVEL 12, 197 ST GEORGES TCE, PERTH 6000

