



Hydrogen  
Society  
of Australia

Looking backwards, looking forward!

Hydrogen is marching on – will you join us?

### In this month's email....

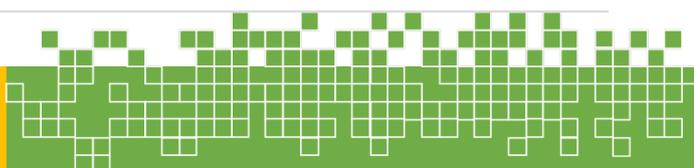
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### Message from the HSA Steering Committee

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 launched a 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](#).



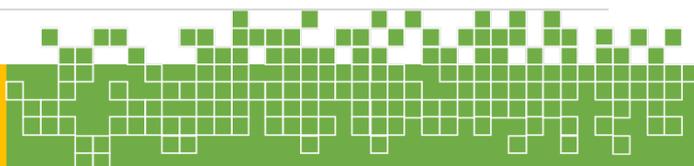
Members Spotlight – 4<sup>th</sup> Australia Hydrogen Day 08 October 2022 – Key Takeaways

The Hydrogen Society of Australia (HSA), in collaboration with Murdoch University, delivered a hybrid event to celebrate the 4th Australia Hydrogen Day 2022 (AHD22) on Saturday the 8<sup>th</sup> October 2022, from 9:30 am to 3:00 pm, in the Kim Beazley Lecture Theatre at Murdoch University. There was also a live broadcast from Perth to the other States. Thanks to **GM Shafiullah**, **Kuruvilla Mathew** and **David Goodfield** for their support.



**Lorie Jones – HSA Vice-President:** I was honored to facilitate the proceedings of the 4th Australia Hydrogen Day celebrations. We were pleased to have the **Hon Alannah MacTiernan (Minister for Regional Development; Agriculture and Food; Hydrogen Industry)** to present at this event. Speakers from government, industry and academics provided an interesting perspective on the status and future strategy for the hydrogen industry. Pre-recorded messages of support were received from around the country and the globe (**Australian Hydrogen Research Network; Fuel Cell and Hydrogen Energy**

**Association; and Hydrogen Sussex**). In addition, there was an exhibition of hydrogen industry and hub developments, research projects, and a hydrogen-themed students' poster competition to facilitate engagement and collaboration. The organization of this event took place over many months, with regular planning sessions and followup activities. Many thanks to **Furat Dawood** for his vision of "the impossible"; to **Alan Thompson** for pulling together the exhibition logistics; and to **Ghazal Avignon** for coordinating the Student Poster Competition. The event would not have been possible without the support of **Dräger** (our Platinum Sponsor); **Horizon Power** and **DevelopmentWA** (our Gold Sponsors); **Hybrid Systems**, **Harry Butler Institute**, and **World Renewable Energy Congress** (our Silver Sponsors).



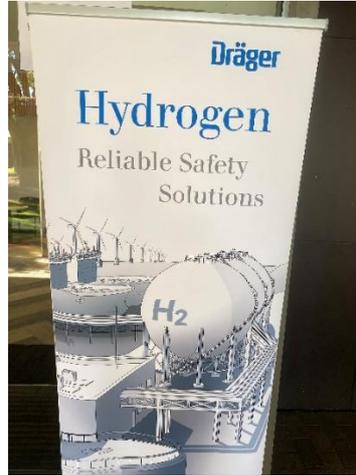
**Alan Thompson – Exhibition and Event Logistics:**

A great turnout by hydrogen exhibitors to raise hydrogen awareness. Special thanks to the following exhibitors: Dräger Australia, Hybrid Systems Australia, ATCO, Dangerous Goods and Critical Risks Directorate (Department of Mines, Industry Regulation and Safety), Hytern, Engineers Australia and the Harry Butler Centre. Brian Haggerty HSA Chair was able to celebrate AHD with many of the key exhibitors.

**Dräger Australia and New Zealand**

[https://www.draeger.com/en\\_aunz/Home](https://www.draeger.com/en_aunz/Home)

International leader in the fields of medical and safety technology. Dräger offers a full range of gas detection technologies that are designed for the specific and continuous monitoring and detection of hydrogen. From consultation, design, and implementation of fire and gas detection systems to ongoing maintenance, Dräger can assist you to maintain plant safety and compliance.



**Hybrid Systems Australia**

<https://hybridsystems.com.au/>

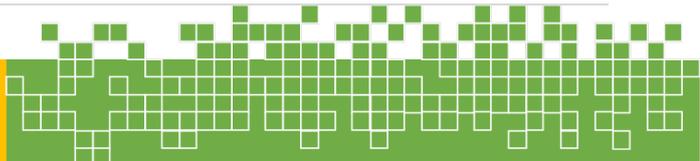
Specialists in stand-alone power systems, hybrid renewables (including solar, wind, hydrogen and storage, combined with back up thermal generation), microgrids and integrated grid-connected renewable energy systems. Ashton Burton (Engineering & Design Division Manager) celebrating AHD with his team. Great Hydrogen Fuel Cell display.

**Hytern**

<https://www.hytern.com.au/>

Hydrogen fuel cell long-range drone. Born out of the cooperation of experts in the fields of hydrogen propulsion, drones and radio communications, Hytern is set to be another Australian first. Like the Arctic tern, Hytern will reach the furthest and fly the longest than any other known commercial drone.

Carlos M Tomaz Co-Founder & CEO celebrating AHD with Brian Haggerty HSA Chair.





**DMIRS - Dangerous Goods and Critical Risks Directorate**

[https://www.dmp.wa.gov.au/Documents/Dangerous-Goods/DGS\\_IS\\_Hydrogen.pdf](https://www.dmp.wa.gov.au/Documents/Dangerous-Goods/DGS_IS_Hydrogen.pdf)

Heather Shaw Senior Dangerous Goods Officer and team celebrating AHD with Brian Haggerty HSA Chair.

A very informative display on hydrogen regulations, safety guides, dangers and critical risks.

**Ghazal Avignon – Student Poster Coordinator:**

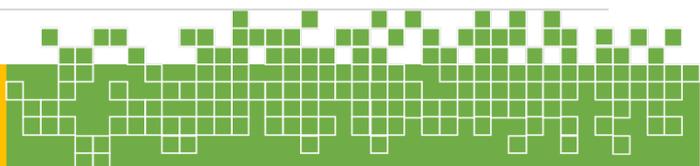
It was my pleasure to coordinate the inaugural student poster competition this year for our 4<sup>th</sup> annual Australian Hydrogen Day (AHD) celebration. We had a great response to the competition with some amazing work done by the students across Australia.

This was a great opportunity to showcase the hard work that has been achieved by students to the **Hon Alannah MacTiernan** (Minister for Hydrogen Industry) as well as other public and private sector representatives.



For ranking the posters, we had a list of criteria for selecting the winners, mainly based on addressing hydrogen industry challenges and providing solutions with a clear message that has a logical flow and easy to understand content.

We had a diverse judging panel from **Woodside Energy, ATCO, Perth & Peel Cluster, Development Australia and Hybrid System**. The judges scored the posters based on their own experience and the list of criteria that we provided them. Our sincere appreciation to the judging panel and all the student participants.



We had two competitions, one for postgraduate students where we selected 3 winners and another competition for undergrad students where we selected one winner. The competition was tight and the scores were very close.

Our undergrad poster competition prize goes to **Murdoch University** participants for their outstanding submissions (Braiden Robson, Bradley Skellern and Dale Crossley-Guy).

Congratulations to the winners from **Monash Energy Institute**, for receiving 1<sup>st</sup> (Kaiqiang He) and 2<sup>nd</sup> (James Wang) prize for postgrad poster competition.



Krista Davies from **Edith Cowan University** picked up the 3<sup>rd</sup> place prize.

We are pleased to offer one-year free HSA membership to the students who submitted their posters for the 4th Annual Hydrogen Day conference. Posters will be displayed on the HSA website in the Knowledge Centre over the coming weeks. <https://hydrogensociety.org.au/knowledge-centre/>

**Brian Haggerty – HSA Chair:** I was pleased to provide the closing remarks after the excellent presentations. My key takeaways are that we are in a great position to take advantage of the opportunities presented by hydrogen developments in Australia.

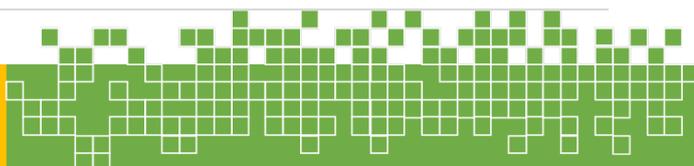
We can integrate all the capabilities and natural advantages we have. For example, integrating:

- the spiritual and environmental knowledge of the traditional owners of this land, with;
- the entrepreneurship of our developers, with;
- the skills and knowledge of our resources industries, with;
- the capability of our government ministers and departments, with;
- our academic and training institutions.

If we pull it all together, we will be hydrogen industry leaders. But, on the other hand, if developments are in isolation from each other, then we will not be competitive with developments in other countries and jurisdictions. This is particularly true if we do not share infrastructure.

The traditional owners have shown us how to collaborate. They welcome people to each other's lands and share knowledge and resources. They know that there is no long-term advantage to keeping it to ourselves. On the contrary, collaboration and sharing infrastructure and resources always wins. It wins for the community, the environment and the enterprises developing hydrogen. But, unfortunately, it has taken us, in industry, a while to realize that sharing produces the best outcome for our individual enterprises.

**Katie Cook (Department of Jobs Tourism, Science and Innovation)** has shown us some of those opportunities in how the state government supports the development of the Hydrogen Hubs. I only wish we had done this with our previous resource developments in WA. I must salute the Minister, the government departments, and **DevelopmentWA** for being thoughtful and proactive regarding hydrogen. Industry representatives have shown us that Australia has all the entrepreneurial skills and originality needed. Perhaps there is also an



opportunity for more integration and less competition in the university sector. Let's integrate and share knowledge to ensure we keep hydrogen marching on!

The Hydrogen Society of Australia focuses on providing an opportunity for collaboration whilst supporting the workforce to transition to hydrogen through education and knowledge sharing.

**References:** The presentations and videos from the Australia Hydrogen Day event will be uploaded onto the HSA website over the coming weeks. For access to these presentations and video recordings, login to your members portal and go to the Knowledge Portal under the video section:

Australia Hydrogen Day – Knowledge Portal <https://hydrogensociety.org.au/knowledge-centre/videos/>

### Member Benefits – WA Business News Subscription (free guest access and discount)

The Hydrogen Society of Australia (HSA) has partnered with Business News (BN), to explore and collaborate on opportunities to promote hydrogen initiatives to professionals and the broader community. Business News is a respected, trusted, and credible independent news source for WA businesses and for any Australian with an interest in commerce, politics, and industry.

As highlighted by Ashleigh Dovadola (BN Subscription Relationship Manager), Australians are turning to BN not only for their business needs but also their daily news intake. Across our website platform we reach over 2 million unique readers annually including over 15,000 fully paid subscribers and a print readership of 25,000 senior executives. Business News would like to offer HSA members guest access for 4 weeks to explore our full content and features so that key individuals can gain a better insight into why Business leaders choose to engage with us year on year.

If you are interested to have free guest access for 4 weeks to explore Business News, please select the WABN subscription product within our Members Only portal:

<https://hydrogensociety.org.au/product/hsa-members-benefit-wa-business-news-subscription/>

### Training Round 2 – Safety and Risk Management, Standards and Regulations

The **Hydrogen Society of Australia** collaborated with **Gexcon** and **Integrated Energy** to provide a half-day training course and networking sessions on 24 August. The course provided an overview of the hydrogen ecosystem, hydrogen safety and risk management, standards and regulations. The participants came from a range of backgrounds including government entities, engineering consulting companies, academic institutions, and energy providers. The overall feedback from the event was very positive, and we delivered a repeat of this training module on 05 October. The course participants have since received copies of the training material.



### Upcoming HSA Event - World Renewable Energy Congress XXI – December 4<sup>th</sup> to 9<sup>th</sup>

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 4<sup>th</sup> to 9<sup>th</sup> 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 4<sup>th</sup> December.

**HSA Power-to-Hydrogen-to-X (P2H2X) Short Course:** This short course is aimed at academics and industry leaders interested in learning more about the advantages and uses of different Hydrogen technologies. The P2H2X short course covers the Hydrogen Economy's essential technical and economic aspects comprising the four main areas of the hydrogen economy: production; storage and transport; safety and risk management; and utilisation. Several aspects of each of the areas will be presented and discussed. The presenters are recognised leaders in industry and academia who are abreast of the most current status of each area.

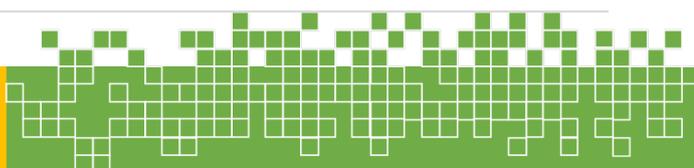
**HSA Hydrogen Industry Workshop:** A hydrogen industry workshop will follow the short course. The hydrogen industry leaders will present their projects' development, technical challenges, and barriers that hinder the Hydrogen Economy advancement. Presentations will be followed by a round table discussion to resolve the technical challenges and overcome regulatory, policy, and financial barriers. Participants will have the opportunity to hear directly from the Hydrogen Industry leaders and discuss their insights with the subject matter experts and the WREC 2022 conference delegates.

Online registration is available now on the [WREC2022 website](#). **HSA members will receive a 10% discount. Sign into your HSA members portal and [click here to obtain your unique coupon code](#)**

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

#### 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 focusing 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 **a 10% discount on registration fees for HSA Members**. **Sign into your HSA members portal and [click here to obtain your unique coupon code](#)**. Register online with your coupon code on <https://www.metal-hydrogen2022.com/>.



### **Global Hydrogen Energy Meet: Positioning Hydrogen 2022 - November 21<sup>st</sup> to 23<sup>rd</sup>**

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. Sign into your HSA members portal and [click here to obtain your unique coupon code](#)**

More information on <https://hydrogenconferenceaustralia.com/registration-form#>

### **Snippets of Hydrogen making moves around the world**

#### **2022 10 19\_Six Picked for Oakajee Hydrogen Hub\_BN:**

BP and Fortescue Future Industries are among six companies selected for land at the state government's planned Oakajee green hydrogen precinct. The 1,100 hectare zone in the Mid-West has been a centrepiece of the government's plan to support a local hydrogen industry, and to launch development at the long awaited port site. The greenfield Oakajee site is recognised for its world class wind and solar potential, which is ideal for the production of renewable hydrogen. <https://bit.ly/3geR9eG>

#### **2022 10 18\_Woodside Energy buys \$90m kit for Oklahoma hydrogen plant\_The Fin:**

Woodside Energy has awarded Norway's Nel Hydrogen Electrolyser a \$90 million contract to supply alkaline hydrolysers for the initial stage of its H2OK project in Oklahoma – its first green hydrogen project globally and one of the earliest "green" hydrogen projects to get under way in the US.

<https://www.afr.com/companies/energy/woodside-buys-90m-kit-for-oklahoma-hydrogen-plant-20221017-p5>

#### **2022 10 12\_Auto tech and the drive to innovate\_BN:**

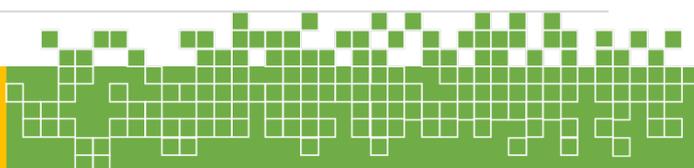
Electric vehicles are increasing in popularity and even the Western Australia Police Force has been trialling e-vehicles – a Hyundai Ioniq 5 and a Toyota Mirai hydrogen fuel cell electric vehicle – for potential frontline applications. The patrol cars are operating in Midland, Rockingham, Geraldton, Bunbury and Fremantle. Featuring specs like a 20-minute supercharge time, with a 330-kilometre range, it's hoped that vehicles like the Hyundai Ioniq 5 will help achieve zero-emission targets. The Mirai on the other hand is extremely low maintenance (only requiring two brake changes in the lifetime of the car) and is as green as they come. However, there is only one hydrogen refill centre in WA, located in Jandakot, currently minimising the potential use of the car.

<https://bit.ly/3T3AgIE>

#### **2022 10 11\_BPH cashed up for hydrogen, gas and CCS plans\_Stockhead:**

BPH has secured additional funds to accelerate its hydrogen, gas and carbon storage plans after receiving binding commitments for a \$1.2m placement. The placement of shares priced at 1.8c each follows on the company recently receiving applications totalling \$1.83m for its non-renounceable rights issue of one share priced at 1.3c each for every 25 shares held. Participants to the placement, which was managed by Everblu Capital, will also receive one option exercisable at 3c and expiring 30 September 2024 for every share they subscribe for. BPH Energy (ASX:BPH) notes it is now well funded to pursue the next phase of its hydrogen investment as well as the proposed PEP 11 Gas and Carbon Capture Storage project at Baleen offshore New South Wales, which is being advanced by Advent Energy (BPH 36.1%).

<https://stockhead.com.au/energy/bph-cashed-up-for-hydrogen-gas-and-ccs-plans/>



**2022 10 07\_ ARENA feeds \$13.7m to Twiggy's green machine\_BN:**

Plans to convert a Queensland ammonia plant to run on green hydrogen will enter front end engineering and design, proponents Fortescue Future Industries and Incitec Pivot. The Gibson Island ammonia plant is operated by Incitec, with the ASX-listed chemicals business last year saying it would need to close the plant because it could not secure a gas supply. But plans for a green hydrogen-powered plant promise a new life for the plant. Feasibility work suggests FFI will need to build 500 megawatts of electrolyser capacity to produce 70,000 tonnes of renewable hydrogen a year. The green hydrogen is produced by running renewable power through the electrolysers to split water into hydrogen and oxygen, with the hydrogen then to be used to make ammonia. The electrolysers will be supplied by FFI's manufacturing facility, also in Queensland, where construction was announced to have commenced in February this year. The federal government's Australian Renewable Energy Agency chipped in \$13.7 million today to fund feasibility work, which is estimated to cost \$38 million. A final investment decision for the 400,000tpa green ammonia project is due in 2023.

<https://bit.ly/3T8R9LE>

**2022 10 06\_Frontier Energy locks-in collaboration agreement with Waroona Energy\_Stockhead:**

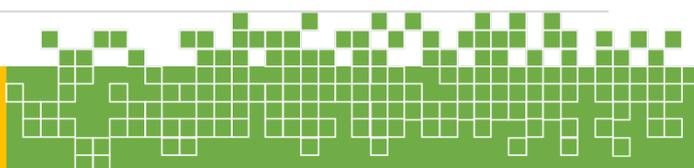
Frontier and Waroona have signed a collaboration agreement regarding their respective strategies for renewable energy production, roughly 120km from Perth. Waroona Energy is developing a 241MW solar farm adjacent to Frontier's (ASX:FHE) Bristol Springs Project and like FHE, key approvals are in place with construction set to kick off in 2023. While the collaboration agreement is not intended to create a joint venture, partnership, or other relationship in which the parties have shared ownership, the two entities will explore how they can benefit from sharing specialist resources in the areas of engineering and project management. A Pre-Feasibility Study has already found that Bristol Spring Stage One could power a 36.6MW electrolyser to produce 4.4 million kilograms of green hydrogen per annum at just \$2.83/kg – well within reach of the \$2/kg price point where the green fuel is considered to be competitive with fossil fuels. Further expansion is likely to further reduce costs given the economies of scale and shared associated infrastructure.

<https://stockhead.com.au/energy/frontier-energy-locks-in-collaboration-agreement-with-waroon-energy/>

**2022 10 05\_FFI backs proposed hydrogen, LNG import terminal\_BN:**

A Netherlands subsidiary of Fortescue Metals Group's renewables division will invest \$US98 million (\$A151.3 million) to bankroll the construction of a green hydrogen and liquified natural gas import facility in Wilhelmshaven, Germany. The proposed terminal is led by German energy infrastructure developer Tree Energy Solutions (TES), which is working to establish a portfolio of import facilities internationally designed to fast-track transport of green energy and LNG. It marks Fortescue's second LNG-affiliated investment, with its Port Kembla project, by Tattarang subsidiary Squadron Energy through its affiliate Australian Industrial Energy (AIE), currently under construction.

<https://bit.ly/3CL4xyW>



**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  
Environmental Engineers International  
Gexcon  
CO2CRC Ltd  
Hyzon Motors  
Good Water Energy Ltd  
Murdoch University  
Harry Butler Institute  
Draeger Australia Pty Ltd  
Hybrid Systems Australia  
Parker Hannifin

Hydrogen Energy Pty Ltd  
Integrated Energy Pty Ltd  
Polish Investment and Trade  
Truck Centre WA  
Edith Cowan University  
Queensland University of Technology  
Business News  
HF Integration  
Horizon Power  
DevelopmentWA  
Sheoak International  
Environmental Clean Technologies Limited

**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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