



Hydrogen  
Society  
of Australia

Looking backwards, looking forward!

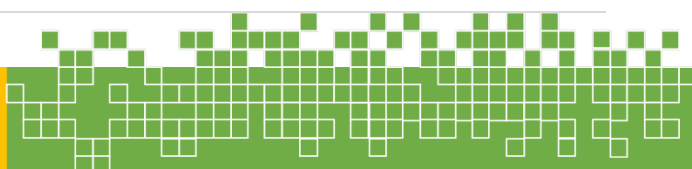
Hydrogen is marching on – will you join us?

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- We acknowledge the support of our corporate partners!

### Message from the HSA President – Adam Osseiran

The **Australian Hydrogen Day (AHD2022)** on October 08 was a great success, judging by the comments received by many attendees. Surely there are some improvements to be made and we will endeavor to prepare a better and bigger AHD version in 2023, hopefully running in parallel throughout the whole nation. Ironically, I didn't attend the AHD this year as I was travelling in the USA in October where I met and recorded the welcome message played during AHD 2022, along with **Frank Wolak**, President of FCHEA, the USA Fuel Cell & Hydrogen Energy Association. FCHEA started the Fuel Cell & Hydrogen Day back in 2015 and even got it approved by the US Senate, declaring October 8 a **National Hydrogen & Fuel Cell Day** for the United States. One of our projects at HSA is to convince the Australian Federal Government to declare October 8 a National Hydrogen Day. The following week on October 11, I attended an invitation-only Workshop on Hydrogen organised by the **Energy Futures Initiative**. EFI is a Washington-based non-profit organisation dedicated to harnessing the power of technology and policy innovation to accelerate the clean energy transition. The Workshop title was 'A Global Hydrogen Future' and it was hosted by EFI's Chairman & CEO **Dr Ernest J. Moniz**, former US Secretary of Energy in the President Obama Administration. In the morning session, a series of presentations were given by prominent speakers from the US, Europe, MENA region and Asia. This was followed by a panel discussion and an overview of the hydrogen potential and value chain in the US and MENA region. The afternoon was organised around three breakout sessions on: Regulatory/Policy; Finance; and Value Chain. A summary of the key findings will be presented in our next month's HSA Newsletter so stay tuned. **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 – HSA Safety and Risk Management Professionals

[Dr Alan Thompson](#) is a [Lead Safety, Risk and Assurance Specialist](#) and will be providing regular contributions to the HSA newsletter. A concern raised by many HSA members is the uncertainty of planning projects where there is a degree of ambiguity in meeting safety, reliability, operational, and regulatory requirements. Many regulators now consider the use of hydrogen as a fuel to be a new and novel application. Accordingly, industry can expect the assessment of licence applications and approvals for hydrogen production, storage and handling to be assessed with a much high level of rigour proportionate to the complexity and operational risk of the proposed facilities or activities.

Consistency of Australian hydrogen regulations are considered by many a key enabler for the rapid emergence of a safe and clean hydrogen economy. Queensland appears to be the most proactive progressing with their [Hydrogen Safety Code of Practice \(Petroleum and Gas Inspectorate\)](#) (September 2022 FINAL DRAFT). More recently Western Australia has released its [Dangerous Goods Safety Guide - Storage, handling and production of hydrogen](#) (October 2022). The majority of other states are still a “work in progress” with no visibility of a consistent national hydrogen safety strategy.

HSA with the collaboration of its member safety professionals such as [Derek Cross - Gexcon Team Lead](#); [Fiona Mitchell-Corbett - Gexcon Vice President Hydrogen Safety](#) and [David Cavanagh - Managing Director of Integrated Energy](#) has enabled the delivery of HSA’s Hydrogen Safety and Risk Management Training. The training has been very successful and is anticipated to run again in early 2023.

HSA also acknowledges its safety product members, such as **Dräger Australia and New Zealand**. [Dräger](#) is an international leader in the field of safety technology and is a strong supporter of HSA. Dräger offers a full range of gas detection technologies that are designed for the specific and continuous monitoring and detection of hydrogen. [Satiesh Muniandy](#), Dräger National Business Manager, contactable at [Satiesh.Muniandy@draeger.com](mailto:Satiesh.Muniandy@draeger.com), can direct any inquiries for consultation on hydrogen gas detection systems.

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### Education and Knowledge Sharing – 4<sup>th</sup> Australia Hydrogen Day 08 October 2022 – Presentation Material

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.

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).

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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. The presentations and videos from the Australia Hydrogen Day event have now been uploaded onto the HSA website Members Portal.

Login to your password protected members portal and you can access the videos and powerpoint presentations in the **Knowledge Centre**: <https://hydrogensociety.org.au/knowledge-centre/videos/>

You can also view the event proceedings and find the links to the various presenters under **Past Events**:

<https://hydrogensociety.org.au/product/4th-australia-hydrogen-day-celebration-2022/>

Student posters have been displayed on the HSA website in the Knowledge Centre

<https://hydrogensociety.org.au/knowledge-centre/educational-content/>

### Mission Hydrogen - Online Conference – 08 November 2022 - Presentation Material

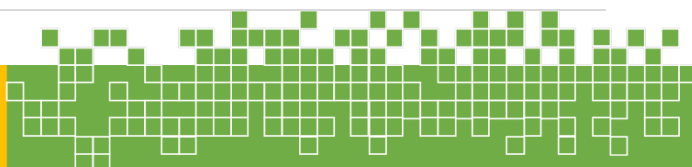
Thousands of the world's smartest hydrogen executives, experts, scientists and policy makers attended the Hydrogen Online Conference (HOC) for one reason: The Content. The Hydrogen Online Conference comprised 24 hours of groundbreaking, up-to-date and inspiring content from experts and industry leaders who came on line to share their knowledge wrt actionable insights, best practices from high-class companies, and innovative ideas from the hydrogen industry. The recorded content is now available to purchase online. <https://hydrogen-online-conference.com/>

### 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. [click here for the short course flyer](#)

**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. [click here for the industry workshop flyer](#)

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](#).**

If you register for the full conference, then you can attend the short courses and workshops at no additional charge. If you wish to attend only the Sunday short course and/or workshop, then you can claim a 10% discount code through the HSA members portal (see above).

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

#### 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#>

#### China Conference on Green Hydrogen Energy Development -November 23<sup>rd</sup>

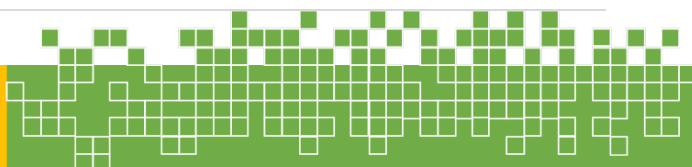
HSA President Adam Osseiran has been invited to participate at the 2022 China Conference on Green Hydrogen Energy Development. Like his presentation in 2021, this year's participation will be via a recording of a 20-minute presentation to be played back during the conference.

#### Hydrogen Queensland End of Year Industry Showcase – December 08

Following the success of H2Q's Inaugural Hydrogen Connect Summit held on 8-9 Sept in Brisbane - [View event highlights](#) which attracted over 400 attendees, attention now turns to H2Q's 2nd Annual End of Year Industry Showcase. The Showcase is set to take place on the evening of 8 Dec 2022 at Customs House Brisbane. The festive season is upon us, this is your chance to enjoy a drink and some canapes as you hear the latest hydrogen updates from H2Q and Queensland Government, including:

- The release of the much-anticipated WHITE PAPER, written in response to this year's Hydrogen Connect Summit. Ensuring no question from the Summit goes unanswered and action remains at the forefront.
- A closer look at the Queensland Government's Energy and Jobs plan and Infrastructure review, with an update on the progress being made to build capability to accelerate Queensland's growth as a Hydrogen superpower.

For more information about the event and to book your tickets <https://h2q.com.au/events/>



## Snippets of Hydrogen making moves around the world

### **2022 10 25\_The green hydrogen hype has come and gone – these ASX stocks are left standing\_Stockhead:**

While the froth from the initial excitement about green hydrogen seems to have settled, there are several ASX players still in the game making big strides towards production. The global hydrogen hype peaked back at the start of 2021, as evidenced by the share prices of international green hydrogen firms like NASDAQ-listed Plug Power, Norwegian company NEL ASA and UK-based ITM Power. “However, they have collectively dropped by more than 50% since, even as tangible hydrogen momentum has built.” Fast forward to 2022 – it is obvious energy policy and strategy is being rethought the world over as the war in Ukraine deteriorates, the energy crisis deepens, and inflation keeps pushing electricity prices higher. Hydrogen is now considered the ultimate decarbonisation solution, but the question is, which stocks are left standing? While not purely “green” plays, there has been plenty of movement in 2022 amongst ASX stocks with hydrogen plans. [Click on this article for more details](#)

### **2022 10 25\_Five charts on hydrogen’s role in a net-zero future\_McKinsey:**

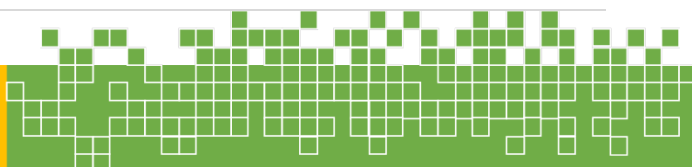
Hydrogen could play a central role in helping the world reach net-zero emissions by 2050. As a complement to other technologies, including renewable power and biofuels, hydrogen has the potential to decarbonize industries including steel, petrochemicals, fertilizers, heavy-duty mobility (on and off-road), maritime shipping, and aviation, as well as to support flexible power generation (among other applications). In 2050, hydrogen could contribute more than 20 percent of annual global emissions reductions. Hydrogen’s potential role in the broader energy transition is explored in a series of industry reports co-authored by McKinsey and the Hydrogen Council—a global, CEO-led initiative with members from more than 140 companies. [Click on this article for further details](#)

### **2022 10 31\_Molten salt, pumped hydro, green hydrogen – non-battery energy storage is ready to take its shot\_Stockhead:**

While much of the rhetoric surrounding hydrogen makes it out to be some kind of green fuel, the reality is that it is really a form of non-battery energy storage. Like all other forms of energy storage (battery or otherwise), the basic premise is simple. Take electricity at its cheapest point of the day and use it to run electrolyzers that turn water into hydrogen and oxygen. Store hydrogen in tanks and it can be used directly as a fuel or run through fuel cells to generate electricity. Of course, there are other ways to store the hydrogen with some proposing the use of depleted natural gas or oil reservoirs while others are proposing new ideas such as Tempo proposing the use of solid metal hydrides that require far less space than pressurised tanks. [Click on this article for more information](#)

### **2022 11 02\_BP forges ahead with WA green hydrogen despite ‘high complexity\_WAToday:**

BP will aggressively chase Pilbara miners to buy its green hydrogen ahead of exporting it, as the UK oil and gas major gets the ball rolling on the \$US36 billion (\$56 billion) green hydrogen project in Western Australia. BP bought a 40.5 per cent share of the Asian Renewable Energy Hub in June. If fully developed, the hub would cover 6500 square kilometres of northwest WA with more than 1700 wind turbines - up to 290 metres high - and 18 large-scale solar farms. [Click on this article for further details](#)



**2022 11 03\_Pure Hydrogen sets sail with Aus Ships hydrogen agreement\_Stockhead:**

Pure Hydrogen's efforts to build the hydrogen economy have borne fruit with the signing of a terms sheet with Aus Ships Group for the delivery of hydrogen fuel to the marine sector. Under the agreement, the two companies will form a joint venture to deliver hydrogen fuel cell generators, hydrogen fuel supply and/or fuel cells to the sector. [Click on this article for more details](#)

**2022 11 04\_The Titanium Economy: Capturing opportunities in the energy transition\_McKinsey & Company:**

Many US manufacturers have made significant investments in the energy value chain in the past ten years. In this period alone, American industrial companies have reduced their collective carbon footprint by 12 percent, with signs pointing to an acceleration of these efforts. Today, companies in the Titanium Economy are finding value in sustainable manufacturing, making strides in recycled materials, solar power, and new sources of sustainable fuels such as green hydrogen. Take clean-energy upstart Ohmium, for example, a pioneer in creating cost-effective polymer electrolyte membrane (PEM) electrolyzers to produce green hydrogen, which can be used as a heat source to power factories, a feedstock to make industrial chemicals, and eventually an energy source to help balance our grids. The rapid shift to electrification and sustainability has created white space across the industrial landscape and new opportunities to create and capture value. [Click on this article for more details](#)

**2022 11 07\_MacTiernan quits after 26 years\_BusinessNews:**

Labor Party Minister Alannah MacTiernan has announced her resignation. While the timing of the decision may have surprised some, Ms MacTiernan had previously said she did not intend to contest the 2025. Premier Mark McGowan praised her extraordinary political career that took her from the City of Perth as a councillor to the federal parliament. Following the 2021 state election, Ms MacTiernan relinquished the jobs & trade and ports portfolios, and became the minister assisting the minister for state development for hydrogen. Ms MacTiernan added hydrogen industry to her regional development, agriculture and food portfolios in the December cabinet reshuffle. She has spent a total of 13 years in ministerial roles. <https://bit.ly/3X2kppX>

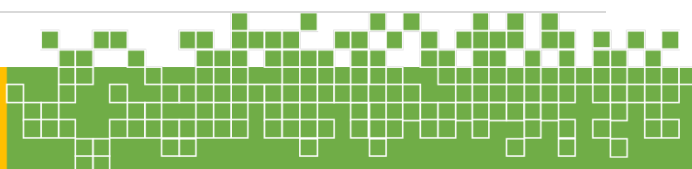
**2022 11 08\_Push for Perth to host COP climate summit\_Business News:**

Copenhagen, Glasgow, Paris; now there's a move to add Perth to the list of host cities for the annual United Nations Conference of the Parties climate summit. The City of Perth is set to consider developing a proposal to host the major summit at its 29 November council meeting. Perth could have a strong case as a future host city, given Western Australia's potential to play a big role in the energy transition. The state is one of the world's biggest liquefied natural gas exporters, used as a transition fuel to firm up renewables. There are an array of huge projects proposing to produce and export green hydrogen, while WA is also home to the world's largest hard rock lithium mine and a range of battery minerals mining and refining projects. <https://bit.ly/3AhwxcZ>

**2022 11 09\_Infinity Lithium eyes renewable energy for Spanish asset\_Business News:**

Infinity Lithium has sealed a binding memorandum of understanding with Spanish energy firm Enalter to assess a renewable energy project that could drive down costs associated with the explorer's in-development San José lithium project. As part of the deal the Perth-based company through its wholly-owned subsidiary, Extremadura New Energies, will seek to capitalise on the region's sprawling alternative power prospects through solar, methane and green hydrogen operations.

<https://bit.ly/3E9M937>



**2022 11 09\_Top 10 at 10: This ASX green hydrogen stock just caught a rocket in early trade\_Stockhead:**  
Australian superannuation fund HESTA agrees non-binding Term Sheet for the investment of up to \$100 million in ReNu Energy's (ASX:RNE) green hydrogen projects. [Click on this article for more details](#)

**2022 11 10: Hydrogen's role in decarbonising mining\_EA Create:**

Every three months, one meeting sees some of Australia's biggest miners set their usually competitive natures aside. Instead, Anglo American, BHP, Fortescue, Shell and engineering consultancy Hatch meet to openly share what they're working on, trends and key challenges they're facing. It's known as the Green Hydrogen Consortium, and it's shaping the decarbonisation of Australia's mining industry. Long-term, the consortium wants to actively back projects that will scale in favour of rapid hydrogen development. While the consortium operates with strict competition rules – they can't do anything that would breach the Competition and Consumer Act – the group wants to find places to collaborate. There are specific applications in remote areas where bringing diesel in and storing it is now on par with producing hydrogen at site and storing hydrogen onsite, just because of the high cost of diesel in those remote areas. [Click on this article for more details](#)

**2022 11 11\_Pure Hydrogen secures land for south-east Queensland hydrogen hub\_Stockhead:**

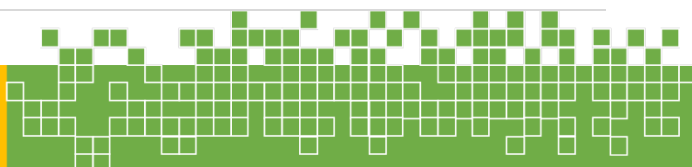
Pure Hydrogen's (ASX:PH2) strategy of establishing hydrogen hubs across Australia has taken a key step forward with the securing of an option to acquire land at Bracalba, in Queensland's Moreton Bay district. The company intends to establish emerald hydrogen manufacturing and distribution facilities at the 21-hectare site, which will serve customers across Queensland's southeast region from the Sunshine Coast to the Gold Coast. Emerald hydrogen uses waste woody biomass source from nearby logging operations that would otherwise end up as landfill and converts it into clean hydrogen using gasification technology developed by joint venture partner CAC-H2. The process also produces biochar and wood vinegar as valuable by-products. [Click on this article for more details](#)

**2022 11 14\_Green hydrogen to help power WA town of Denham in Australian renewable energy first\_ABC News:**

Horizon Power, the state-owned regional electricity utility in Western Australia, has unveiled a pilot project that will convert electricity from a solar plant to make so-called green hydrogen in Denham, 820 kilometres north of Perth. From there, the hydrogen will be used to power a fuel cell capable of generating enough electricity to supply about 100 homes, or a quarter of the town's demand. When fully up and running, Horizon said the hydrogen project was expected to cut the use of diesel in the town by 140,000 litres a year. State Hydrogen Industry Minister Alannah MacTiernan said the displacement of diesel was a focus of the trial given the fuel's skyrocketing cost and Australia's total dependence on imports for supply. [Click on the article for more details](#)

**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/>

**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



**LEVEL 12, 197 ST GEORGES TCE, PERTH 6000**

