Newsletter

27 February 2023



Looking backwards, looking forward!

Hydrogen is marching on – will you join us?

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Message from the HSA President – Adam Osseiran

We encourage you to attend the AGM on Tuesday 21 March. Right before the AGM, Professor Craig Buckley (Curtin University) will give a talk followed by an update from Kathy Cook (DJTSI) about hydrogen development in WA. We welcome to the HSA Board, Dr Matthias Raab, CEO of the CO2-CRC in Melbourne. With Matthias, the Hydrogen Society of Australia is another step closer to becoming a truly national organisation. We will soon announce the addition of other members from South Australia and other states. We are in the process of establishing a national structure where each State will have a local antenna that will enable members to organise local face-to-face networking events under the banner of HSA. We continue to support several hydrogen conferences and offer our members discounts and other advantages. Lastly, we will be present at AOG Energy where we will showcase the benefits of hydrogen to the many attendees of this large global conference.

If you haven't joined yet, please consider joining the HSA to get access to free or discounted events, training material and the latest information in the hydrogen space. Our membership rates will be increasing on 14 March, so don't delay – become a member



Members Spotlight – Dr Matthias Raab, CEO of CO2CRC Ltd, Director of the HSA Board



Dr Matthias Raab is the CEO of CO2CRC, a well-respected research organisation globally recognised for innovative carbon capture, utilisation, and storage solutions. Dr Raab is committed to Australia's energy transition as a leader in the global scientific, engineering, energy, and resources sectors. Passionate about finding innovative solutions to energy, climate and resource challenges, Dr Raab's 25+ year career has spanned academia, government, industry, and the not-for-profit sectors and involved collaborating with international leaders and experts in their fields.

I am pleased to introduce myself as a new Director of the Board of the Hydrogen Society of Australia. This is an exciting time to be a part of the hydrogen industry, as Australia is poised to develop the entire hydrogen value chain. As the world transitions towards a low-carbon economy, the demand for clean energy sources like hydrogen is rapidly increasing. Australia has a unique opportunity to become a global leader in the energy transition, enabling hydrogen production at an unprecedented scale. With abundant energy resources, inventive minds, and a skilled workforce, Australia is well-positioned to leverage its strengths to drive the growth of the hydrogen industry. By embracing innovation, collaboration and sustainability, Australia can unlock a range of opportunities across the entire hydrogen value chain, from production and transportation to storage and utilisation.

As a new board director, I have the opportunity to influence the future of the Hydrogen Society of Australia and to help position the Society as the leading network of hydrogen experts across the national and international value chain. The Hydrogen Society of Australia is a vibrant community of experts and professionals united to accelerate the development of a thriving hydrogen economy. One of the key strengths of the Society is its regular events, which provide a unique platform for Australian and international experts to connect and collaborate across all disciplines associated with the emerging hydrogen industry.

Through our events, we facilitate an extensive network of like-minded individuals passionate about exploring the opportunities and challenges of a hydrogen economy. From policymakers and researchers to entrepreneurs and investors, our events bring together a diverse range of experts shaping the hydrogen industry's future. Whether a conference, workshop or webinar, our events allow experts to share their latest research, insights, and experiences. This helps to drive innovation, foster collaboration, and build a strong and resilient hydrogen industry in Australia and beyond.

By joining the Hydrogen Society of Australia and participating in our events, you will have the opportunity to connect with an extensive network of experts, learn from industry leaders, and contribute to the growth of the hydrogen economy. So, take advantage of this unique opportunity to be a part of a dynamic and forward-thinking community and to help shape the future of the hydrogen industry. **Dr Matthias Raab, CEO of CO2CRC Ltd.**

HSA Annual General Meeting 2023 will be held on 21 March 2023

The date and time of our Annual General Meeting is confirmed for Tuesday 21 March. This will be a hybrid event based in Perth, with the proceedings broadcast live across the globe. Perth based members are welcome to network over breakfast from 7:30am to 8:00am AWST. Before the start of the formal AGM, we have invited speakers from government and academia to present their insights in the hydrogen space:

- **Ms Katie Cook**, Director of the Hydrogen and New Energies Division, Department of Jobs, Tourism, Science and Innovation, Government of Western Australia
- Professor Craig Buckley, John Curtin Distinguished Professor, leader of the Hydrogen Storage Research Group, Curtin University

Following the presentations, the AGM will begin at 9:10am AWST and will be broadcast live across the country until 10:00am AWST. Over the course of the AGM, we will acknowledge our achievements over the past year (2022) and forcast our proposed initiatives over the coming year. Feedback and insights from our member participants will be welcomed and addressed via a Q&A process. This AGM event is for members only - to register for this event, log in to your members only portal first and then click on the following link:

Hydrogen Society of Australia Annual General Meeting 2023

Not yet a member? You are welcome to join the presentations from government and academia prior to the start of the AGM, either online or in person. If you are based in Perth, you are welcome to join the face-to-face networking session over breakfast and then stay on for the keynote speaker presentations. Click on the following link to find out more about the keynote speakers and expand your knowledge in the hydrogen space: Hydrogen Space 2023: Netwroking and Presentation

Career Opportunity – With International Future Lab – REDEFINE H2E (Munich)

Researcher position opportunities at the Technical University of Munich provided by the <u>Technical University</u> of <u>Munich</u>, <u>Curtin University</u>, and the <u>International Future Lab: Redefine H2E</u>

Working under the supervision of Professor Peta Ashworth (Director of the Curtin Institute for Energy Transition), we have an exciting opportunity available for a Core Scientist, Junior Guest Researcher with fellowship, Senior Researcher with TUM contract, for <a href="https://www.wp4.org/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.com/wp4.

- Scope and expert interviews (academia, policy, industry, NGOs) to create a stakeholder map and assess the current landscape, potential societal and environmental issues and opportunities with regard to the hydrogen technologies
- Working with focus groups and national surveys, you will determine initial public reactions to hydrogen and proposed technologies
- You will also conduct survey analyses and facilitate citizens' panels to identify key factors that might influence public support for the development of a hydrogen industry and related technologies

Click on the following link for further information and how to express interest



Featured Articles – Australian Research and Innovation Rising to the Challenge

2023 02 15_Enhance! Deep learning tool boosts X-ray imaging resolution and hydrogen fuel cell performance_UNSW Newsroom

Researchers from UNSW Sydney have developed an algorithm which produces high-resolution modelled images from lower-resolution micro-X-ray computerised tomography (CT). The new process, detailed in a <u>paper published in Nature Communications</u>, has been tested on individual hydrogen fuel cells to accurately model the interior in precise detail and potentially improve the efficiency of them.

The team, featuring Professor Ryan Armstrong, Professor Peyman Mostaghimi, Dr Ying Da Wang, and Kunning Tang from the School of Mineral and Energy Resources Engineering and Prof Chuan Zhao and Dr Quentin Meyer from the School of Chemistry, developed the algorithm to improve the understanding of what is happening inside a Proton Exchange Membrane Fuel Cell (PEMFC). PEMFCs use hydrogen fuel to generate electricity and are a quiet, and clean energy source that can power homes, vehicles, and industries. These fuel cells convert the hydrogen, via an electrochemical process, into electricity with the only by-product of the reaction being pure water. However, the PEMFCs can become inefficient if the water cannot properly flow out of the cell and subsequently 'floods' the system. Until now, it has been very hard for engineers to understand the precise ways in which water drains, or indeed pools, inside the fuel cells due to their very small size and very complex structures. "From our model we can quickly and precisely see where the water tends to accumulate and therefore, we can help to solve those problems in future designs," says Dr Meyer. "Within the industry it is known that there is a huge untapped performance improvement that could be made using these cells, just by improved water management, and that is estimated to be a 60 per cent increase overall". Click here for full article

2023 02 20_Seawater split for hydro boost_WaterCareer

Australian researchers are making hydrogen fuel directly from seawater, in a huge advance for the technology. A new method from RMIT University researchers splits seawater directly into hydrogen and oxygen - skipping the need for desalination and its associated cost, energy consumption and carbon emissions. Hydrogen could be the next big future fuel, especially for industries that are harder to decarbonise like manufacturing, aviation and shipping. But almost all the world's hydrogen currently comes from fossil fuels and its production is responsible for around 830 million tonnes of carbon dioxide a year. Currently, emissions-free 'green' hydrogen, made by splitting water, is so expensive that it is largely commercially unviable and accounts for just 1 per cent of total hydrogen production globally. Green hydrogen production processes are also costly and rely on fresh or desalinated water. To be truly sustainable, hydrogen fuel production must be 100 per cent carbon-free across the entire production life cycle and must not cut into the world's precious freshwater reserves. To make green hydrogen, an electrolyser is used to send an electric current through water to split it into its component elements of hydrogen and oxygen. These electrolysers currently use expensive catalysts and consume a lot of energy and water - it can take about nine litres to make one kilogram of hydrogen. They also have a toxic output: not carbon dioxide, but chlorine. The new approach uses a special type of catalyst developed to work specifically with seawater. Click here for full article

Member Benefit – Hydrogen Standard subscription (HSA members discount)

The Hydrogen Society of Australia (HSA) has partnered with The **Hydrogen Standard** to offer HSA members a significant discount to gain access to the **Global Government Hydrogen Platform**, a renowned source of hydrogen policy data.

The Global Government Hydrogen Platform offers a unique and comprehensive view of all the countries that are participating in the race to commercialise low-carbon hydrogen, from leading lights such as South Korea and the UK to hopefuls including Estonia and Brunei. If you are in the business of scoping global hydrogen opportunities or need a quick reference guide to the targets, policies and progress happening in any given region then the Global Hydrogen Governance Platform is a key knowledge portal.

Due to the collaboration between the Hydrogen Standard and the Hydrogen Society of Australia, HSA members will get a significant discount on the initial subscription to the platform. Packages differ between student, individual and corporate. If you are interested in subscribing to the **Hydrogen Global Governance Platform** at a significant discount, please select the Hydrogen Standard subscription product within our HSA Members Only portal: Click here for further information

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

The Hydrogen Society of Australia (HSA) has an established relationship 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. 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.

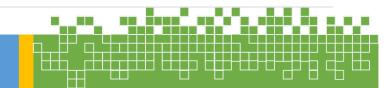
If you are interested to have free guest access for 4 weeks to explore Business News, please select the WABN subscription product within our HSA Members Only portal: click here

Education and Knowledge Sharing – Past Events and Presentation Material

Login to your password protected HSA members portal and you can access the videos and Powerpoint presentations from past events in the <u>Knowledge Centre</u>: <u>Videos</u>. You can also view the event proceedings and find the links to the various presenters under <u>Past Events</u>:

Clean Energy Forum – Perth – 07 February 2023

This event was organized by the Clean Energy Council, with an interesting program of speakers and panel discussions. Whilst the topics were focused on renewable energy solutions such as wind, solar and pumped hydro, there was a strong reference to hydrogen's role as an energy storage and carrier underpinning these discussions.



Australian Hydrogen Research Conference – Canberra – 08 to 10 February 2023

This was the first Australian Hydrogen Research Conference, organised by the Australian Hydrogen Research Network (AHRN). The Conference covered all aspects of hydrogen research ranging from the fundamental science and engineering of hydrogen generation, storage and transport, to the enabling disciplines of economics, regulation, security, sociology and policy applied to a future hydrogen economy. Our HSA Steering Committee member Professor Craig Buckley (Curtin) was one of the keynote speakers. https://ahrc2023.com.au/

Upcoming Hydrogen Events

Decarbonising Transport Week - Free webinars - 06 to 10 March 2023

Decarbonising Transport Week (the UK's official national awareness week) will provide an opportunity for businesses and communities to come together and show how they are leading the way in decarbonising. https://decarbonisingtransportweek.com/#/

AOG Energy - Perth Convention & Exhibition Centre - 15 to 17 March 2023

Returning to Perth for the first time since 2021, AOG Energy will open its doors to the global supply chain from 15-17 March. Supported by government, major operators and industry leaders, this three-day event will showcase innovations and capabilities that solve tomorrow's energy challenges. From offshore wind, to decommissioning, low emissions technology, decarbonisation, subsea, hydrogen, renewables and so much more. AOG Energy will be the destination to reconnect, discover opportunity, and stimulate business growth in 2023. https://aogexpo.com.au/. The Hydrogen Society of Australia is proud to support the energy transition and will have a booth at this strategic event. In addition, in collaboration with Engineers Australia, HSA will support students and young professionals attending the event by facilitating tours of the exhibition. The AOGE student tours are now live on the EA website. Please find the registration links below:

16 March 2023: https://yea.engineersaustralia.org.au/aog-energy-student-tour
17 March 2023: https://yea.engineersaustralia.org.au/aog-energy-student-tour-0

Join us at the HSA booth for collaboration and knowledge sharing – we are all in this together!

Hydrogen Industry technical series – Melbourne – 15 February to 19 April 2023 (5:30pm to 8:30pm AEST)

Delivered by leading hydrogen industry practitioners, the program covers integral topics required by engineers to commence practising in the hydrogen industry. The objective of the program is to provide detailed information on the technical and practical aspects of hydrogen plant design, operation and product development. https://www.engineersaustralia.org.au/learning-and-events/conferences-and-major-events/hydrogen-industry-technical-series#content-tab-0

World Electrolysis Congress - Dusseldorf - Neuss - 14 to 16 March 2023

The annual World Electrolysis Congress https://www.worldelectrolysiscongress.com returns to Germany to bring the entire green hydrogen industry together once again with the objective of accelerating the roll-out and deployment of electrolyser technology to produce clean hydrogen and drive global capacity.

Future Hydrogen Congress Australia - Sydney - 16 to 17 March 2023

This international congress is expecting to attract leading representatives from all over the world including C-level Executives and Head of strategy, sustainable development, hydrogen/new energy business, technology, business development, investment and finance and others of hydrogen relevant companies. http://www.szwgroup.com/future-hydrogen-Congress-australia/index.aspx

Sustainable Aviation Futures APAC Congress – Singapore – 09 to 11 May 2023

The APAC region is home to some of the world's most advanced economies and leading countries when it comes to clean energy initiatives. With regional SAF production facilities emerging and airlines continuing to increase sustainable strategies, Asia Pacific continues to lead developments to decarbonise the aviation industry. This 3-day, high-level networking event will feature over 60 expert speakers sharing insights into the development of sustainable solutions, showcasing policies, strategies and the challenges and opportunities the Asia Pacific aviation market faces in the bid to become carbon neutral by 2050. Click here for more information

ASEAN Green Hydrogen Conference 2023 – Kuala Lumpur – 23 to 24 May 2023

The Hydrogen Society of Australia is confirmed as one of the conference 'Association Partner' in this regional event, which will **provide our members with a 15% discount** on the delegate registration fee. This private and exclusive conference will act as a regional roadmap and aim as the catalyst for the regional's green hydrogen developments, assisting governments, leading energy companies, academics and service providers within the Hydrogen domain across South East Asian countries. Among the conference highlights for this edition including Green Hydrogen Policy and Regulations, Green Hydrogen Ecosystem & Value Chain, Technologies, Research and Developments and Green Hydrogen Financing. https://aseangh2.com/

Connecting Green Hydrogen APAC 2023 - Melbourne - 25 to 26 July 2023

CGHA 2023 will bring together industry live and in person to discuss the green hydrogen agenda in Australia and the APAC region. CGHA creates a unique set-up where the policymakers as well as domestic and international developers, investors, experts and solution/product providers, meet, learn and debate. HSA was a supporting partner for this event in July 2022, and is exploring options for discounted registration to be made available to our members https://www.apac.gh2events.com/agenda

Second Annual Hydrogen Connect Summit – Brisbane – 06 to 07 September 2023

The HSA was proud to have supported the first Hydrogen Connect Summit in Brisbane as an Endorsing Association. Following the Summit there have been myriad State, Federal and private sector initiatives to provide funding, stimulate investment, accelerate off take and address the skills challenge. Click here to view the White Paper https://hydrogenconnect.com.au/latest-news/white-paper/ Dates are locked and loaded for the 2nd Annual Hydrogen Connect Summit 2023 (6-7 Sept 2023) at the Brisbane Convention & Exhibition Centre) and planning is already well underway. HSA members will have access to an exclusive 20% discount off Summit registration. https://hydrogenconnect.com.au/

Snippets of Hydrogen making moves around the world

2023 01 24_WA government prepares to legislate 2050 net zero carbon emissions target_ABC News

The WA government has announced plans to enshrine its commitment to net zero carbon emissions by 2050 in law, but will not set targets to get there until at least the end of the year. The McGowan government had already committed to reducing public sector emissions by 80 per cent by 2030 compared to 2020 levels, and to become net zero by 2050, but these new goals will apply to the entire economy. Environment Minister Reece Whitby said the "important" legislation, which he expected to go before parliament later this year, would send a clear message to businesses and the community about what was expected. The government has been consulting with industries over how they can reduce their emissions since late 2021, with the process not expected to conclude until the end of the year. Mr Whitby said that would help inform the targets the government would set on their way to 2050.

https://www.abc.net.au/news/2023-01-24/wa-target-of-net-zero-emissions-by-2050-to-be-legislated/101886510

2023 02 01_Plug Power, JM form hydrogen partnership_C&EA

Plug Power and Johnson Matthey (JM) are joining to build what they say will be the world's largest facility for catalyst-coated membranes, materials that are at the heart of the electrolyzers used to produce green hydrogen from water using renewable electricity. Plug Power is a player in the growing field of green hydrogen. JM is a specialist in platinum group metal chemistry and catalysis, and it has been investing in hydrogen to help offset the expected decline of its automotive emissions catalyst business. "By bringing together one of the largest green hydrogen and fuel cell companies in the world with JM's technology and manufacturing capabilities, we're creating volume and scale for green hydrogen that hasn't existed until now." JM CEO Liam Condon says in a press release. https://cen.acs.org/energy/hydrogen-power/Plug-Power-JM-form-hydrogen/101/i5?ref=search_results

2023 02 17_Aerison wins \$100m in contract_BN

West Perth-based mining services company Aerison has won \$100 million worth of new contracts for projects across Western Australia and South Australia. This is the second suite of contracts totally more than \$100 million that Aerison has secured since making its debut on the ASX in July 2021. The contracts engage Aerison's environmental engineering and construction services division to deliver air pollution control solutions at several iron ore processing facilities in the Pilbara. CSBP contracted the company to manufacture and install a raw materials conveyor system, which is part of Wesfarmers chemicals, energy and fertilisers portfolio. Another contract came from SMPE&I construction services for work in the agriculture sector, another for the NeuRizer urea project in SA and for electrical infrastructure for the Yuri Green Hydrogen project in WA. https://bit.ly/3KfgHoZ

2023 02 08_Wesfarmers doubles down on Kwinana ammonia_BN

Wesfarmers has lodged plans to more than double its ammonia production capacity in Kwinana, hoping to cut reliance on imports. The company's CSBP business is seeking approval from the Environmental Protection Authority for a 300,000 tonne per annum expansion of its Kwinana ammonia plant. Ammonia has attracted growing interest in recent years. It's used in fertiliser and minerals processing but may also be a future mechanism to export hydrogen. CSBP's plans propose both green and blue production in the new ammonia train, using both natural gas and electricity. The environmental documents show the facility will

draw 27 terajoules a day of natural gas for production through steam reformation, and also use a 10-megawatt electrolyser powered by the grid to produce hydrogen. Hydrogen can be mixed with nitrogen from the atmosphere to make ammonia. https://bit.ly/3XNe4h3

2023 02 09 Do hydrogen fuel cells point the way to a greener transport future? EA Create

According to the CSIRO, the transport sector is Australia's second largest emitter, contributing 19 per cent towards our gross carbon emissions. Decarbonising this sector is becoming increasingly urgent. Of transport emissions in 2019, light vehicles were responsible for 62 per cent with trucks pumping out 20 per cent of total transport emissions. To decarbonise the transport industry, hydrogen which can power a fuel cell with zero emissions, could be used as an alternate fuel for petroleum products.

https://createdigital.org.au/do-hydrogen-fuel-cells-point-the-way-to-a-greener-transport-future/

2023 02 10_Massive clean ammonia projects are shaping up_C&EN

A consortium including Mitsubishi Corporation, the South Korean chemical maker Lotte Chemical, and the German energy firm RWE are launching a study to develop a clean ammonia complex in Corpus Christi, Texas. The complex would produce both green ammonia, in which the hydrogen raw material is produced via electrolysis, and blue ammonia, in which the hydrogen is produced from natural gas but carbon dioxide emissions are captured and sequestered. The partners aim to have the first output by 2030 and ultimately ramp up to 10 million metric tons per year of ammonia capacity. They plan to export the ammonia to Asia and Europe. Separately, the industrial gas maker Linde has signed on as the hydrogen and nitrogen supplier for a blue ammonia project that OCI is developing in Beaumont, Texas. Linde plans to spend \$1.8 billion to build an autothermal reformer, an air separation unit, and carbon-capture infrastructure at the site. OCI will spend \$1 billion on the ammonia plant and is targeting a start-up in 2025.

https://cen.acs.org/energy/hydrogen-power/Massive-clean-ammonia-projects-shaping/101/i6

2023 02 13_Origin sweetens Canning Basin exit for Buru_BN

Origin Energy has agreed to assign its interests in joint venture exploration permits in WA's Canning Basin, including the massive Rafael gas and condensate discovery to Buru Energy for no upfront payment. After the disappointment last year of seeing its JV partner Origin walk away from its WA commitment, 2023 shows more promising signs for Buru Energy, which is also active in battery minerals, carbon capture and storage and natural hydrogen. Last month, with partner EnRes, a subsidiary of Mineral Resources, it won two prospective petroleum exploration permits in the onshore Carnarvon Basin. Also in January, its wholly owned hydrogen and helium subsidiary 2H Resources was confirmed as preferred applicant for six South Australian petroleum exploration licences for hydrogen exploration that are geologically on trend with legacy hydrogen discoveries. Observers will be watching closely to see if such momentum leads to a momentous year. https://bit.ly/318VF8V

2023 02 13_Monadelphous shores up new contracts_BN

Engineering firm Monadelphous Group has booked a suite of new work in the order of \$200 million, including a sizeable contract at BHP's Nelson Point operations. With respect to hydrogen, the group's fabrication business Inteforge has been awarded work by Worley on Rio Tinto's Oyu Tolgoi copper-gold project in Mongolia and with Hydrogen Pro to fabricate and assemble hydrogen gas separator modules for a renewable energy project in the US. That work is set to be completed in the second half of 2023. https://bit.ly/3lHDhMF

2023 02 14_Frontier flags \$9.5m capital reduction at Bristol Spring Solar farm ahead of DFS_Stockhead

Optimisation work has identified a \$9.5m reduction in capital costs for Frontier Energy's 114MW solar farm (stage one) at its Bristol Spring green hydrogen project in WA. During 2022, the WA government announced plans to close state owned coal power stations Muja and Collie by 2029 (Muja 854MW and Collie 340MW) and committed \$3.5 billion in spending to assist in replacing this coal power energy with new renewable energy developments. And the State Government continues to announce major decarbonisation targets, which Mohan says strengthen the strategic importance of the project given its unique location to major infrastructure. "Recent moves include planned legislation for net zero by 2050, 2030 gas emissions reduction target of 80% (compared to 2020) for all government agencies, and potentially most important for our project, the government is targeting 1% of the state's electricity generation to be powered by green hydrogen," he said.

 $\frac{\text{https://stockhead.com.au/?s=Frontier+flags+\%249.5m+capital+reduction+at+Bristol+Spring+Solar+farm+ahead+of+DFS}{\text{ead+of+DFS}}$

2023 02 17_BP moves on \$1bn Kwinana refinery revival_BN

Minister for State Development, Jobs and Trade Roger Cook said the biofuel facility would be a world first for BP. BP's \$1 billion biofuel plant at the old Kwinana oil refinery will convert used vegetable oil and oilseed crops grown in the US into renewable fuel once online in 2026. Roger Cook announced, alongside BP executives, the renewable fuels facility will be up and running in three years. BP is expected to undertake front end engineering and design work before reaching a final investment decision later this year. The facility is being built on BP's old oil refinery site in Kwinana, which was shut down two years ago after it was deemed no longer economically viable. Some of the existing infrastructure will be repurposed for the biofuel refinery while the remainder is currently being demolished. The energy hub could also house a green hydrogen production facility, which is currently being assessed in a feasibility study being supported by a \$300,000 state government grant. https://bit.ly/3lcaffN

2022 02 24_World's biggest green hydrogen project now under construction in China, replacing coalbased H2_Rechargenews

Chinese refining giant Sinopec has broken ground on a massive green hydrogen project in Inner Mongolia that is now the biggest renewable H2 plant under construction in the world. Once built, the 5.7 billion yuan (\$831m) Ordos project will produce around 30,000 tonnes of green hydrogen per year, which will partially displace the use of polluting coal-based "black hydrogen" in a nearby chemicals plant. It will replace Sinopec's other flagship scheme, the 260MW, 20,000 tonnes-per-year Kuqa plant currently being built in the western region of Xinijang, as the world's largest green hydrogen project. Click here for the full story.

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 Hydrogen Energy Pty Ltd
BE&R Consulting Integrated Energy Pty Ltd
Environmental Engineers International Polish Investment and Trade

Gexcon Truck Centre WA
CO2CRC Ltd Edith Cowan University

Hyzon Motors Queensland University of Technology

Good Water Energy Ltd

Murdoch University

Harry Butler Institute

Draeger Australia Pty Ltd

Hybrid Systems Australia

Business News

HF Integration

Horizon Power

DevelopmentWA

Sheoak International

Parker Hannifin Environmental Clean Technologies Limited

The Hydrogen Standard Global Energy Learning Solutions

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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