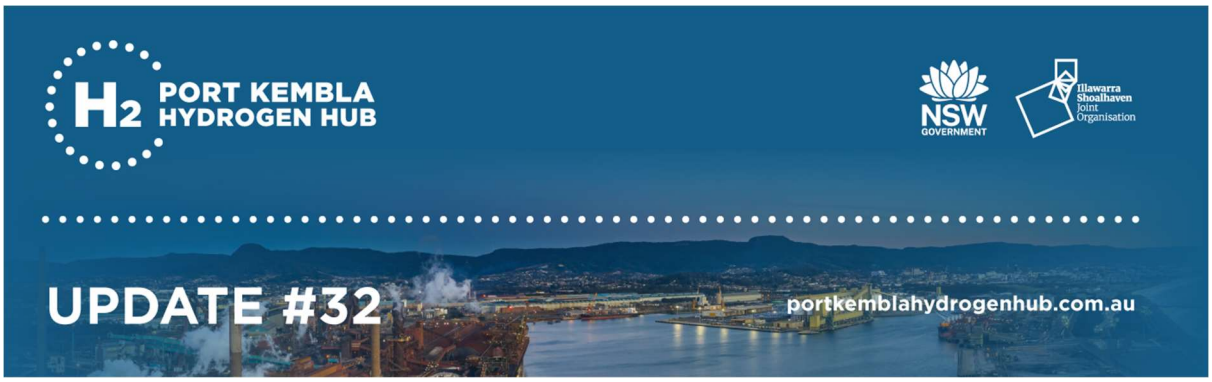


3 April 2025

Greetings from a cooler Port Kembla and welcome to Autumn! This **Port Kembla Hydrogen Hub Update #32** contains information on the following key projects and initiatives:

- **Port Kemba Hydrogen Hub Meeting #17 -** 20 March 2025
- **Malabar Biomethane Injection Plant Tour** - 10 March 2025
- **Offshore wind farm plans paused at request of applicant** - 2 March 2025
- **Green iron fund will lay foundations for Australia to become renewable energy superpower** - 28 February 2025
- **Labor commits $500 million to build wind turbines with Australian steel -** 24 February 2025
- **What do the new tax credits for critical minerals and green hydrogen mean?** - 11 February 2025
- **Hysata inks major electrolyser deal for Saudi green hydrogen** - 11 February 2025
- **Pure Hydrogen Delivers Hydrogen Fuel Cell Truck to Waste Management Company** - 6 February 2025
- **ASEAN Heads of Mission and Consular Corp Delegation Visit** - 6 February 2025
- **Korean Hydrogen Supply Chain Delegation Visit** - 5 February 2025
- **How Green Gravity is leading large-scale energy transition** - 30 January 2025

Previous editions of the **Port Kembla Hydrogen Hub Update** newsletter are available here.

Port Kembla Hydrogen Hub – Meeting #17

20 March 2024

Quarterly meeting of the Port Kembla Hydrogen Hub committee was held on the 20 March 2025. Each year, the first meeting covers activities undertaken in the previous 12 months. 2024 was an extremely busy year for the Hydrogen Hub with 21 international delegations hosted. A highlight of these delegations was the visit by then EU Energy Commissioner Kadri Simson. A high proportion of the international delegations hosted in 2024 were from Japan and Korea, demonstrating the continued interest in Port Kembla from these two jurisdictions

Education has always been a high priority of the Port Kembla Hydrogen Hub. A total of 35 Clean Energy Tours were conducted by Inside Industry with support from the NSW Government and Wollongong City Council. These events attracted 720 people and will continue to be offered to community members until September this year.

Wollongong saw two hydrogen bus trials in 2024, both through Premier Illawarra. The first trial featured a ARCC Longreach Hydrogen City Bus. The second trial featured a Foton Mobility Distribution FTH12 Hydrogen City Bus.

Image: EU Energy Commissioner Kadri Simson addressing Hysata staff. The EU Energy Commissioner visit was a highlight for 2024.

Malabar Biomethane Injection Plant Tour

11 March 2025

Image: Tour delegates in front of the Biodome that provides buffer storage for the biogas upgrading process at the Malabar site. Source – Jemena

The Port Kembla Hydrogen Hub facilitated a tour of the Malabar Biomethane Injection Facility on the 11 March 2025. Hosted by Jemena, delegates from ATCO, NSW DCCEEW, AusIndustry, Coregas, UNSW, Office of the Chief Scientist and Engineer, Illawarra Shoalhaven Joint Organisation of Councils, Austrade and Department of Primary Industries and Regional Development attended the event.

The tour kicked off with an insightful presentation by Jemena's GM for Renewable Gas Suzie Jakobovits. This sparked some excellent discussion about the Malabar facility and biomethane in general. The site tour was conducted by Michael Baker from Jemena, who despite some weather challenges, was a wealth of information about every aspect of the facility. Big shout out to Kieran Skelton and Tanmay Bhardwaj from Jemena for facilitating the tour.

Offshore wind farm plans paused at request of applicant

2 March 2025

Election impacts Illawarra offshore wind zone licensing | Illawarra Mercury | Wollongong, NSW

Image: Climate Energy and Change Minister Chris Bowen with Illawarra MP's Alison Byrnes and Stephen Jones visiting BlueScope Steel for his announcement of the Illawarra offshore wind zone. Picture by Adam McLean

The feasibility licensing for the Illawarra Offshore Wind Zone has been paused until after the federal election at the only applicant's request. Minister for Climate Change and Energy Chris Bowen made the announcement on February 28, 2025, as the final decisions were made for the Hunter and Southern Ocean offshore wind zones. The identity of the only applicant has not been revealed; however, in January, BlueFloat Energy said it was still pursuing the opportunity. The Labor government said the pause was due to "sovereign risk created by Peter Dutton's reckless and

unprincipled opposition". "Offshore wind has huge potential for jobs, new industry, and clean, reliable renewable energy in the regions which have powered Australia for generations," Mr Bowen said. "Peter Dutton is cheering on job losses with his backflip on offshore wind in favour of expensive nuclear, ensuring the end of local manufacturing and industry in the communities that have powered Australia's prosperity for generations."

In a joint statement released on February 28, 2025, Member for Whitlam Stephen Jones, Member for Cunningham Alison Byrnes, Member for Gilmore Fiona Phillips and Labor candidate for Whitlam Carol Berry said they still "supported the zone designation". "When it comes to jobs and economic opportunities for the region, all options must be on the table," they said. "Any proposed project needs to stack up environmentally and economically and must include good local content provisions and demonstrated community benefit. "Peter Dutton and the Liberal Party have proposed no alternative plan to address future industry transition, job creation or energy generation for the Illawarra. Not one." Mr Jones, who is also the Assistant Treasurer and Minister for Financial Services, was first elected to was then the seat of Throsby since 2010. Nationals leader David Littleproud said the party would continue to fight against the windfarms. "The Nationals have led the way in stopping Labor's bad plan," Mr Littleproud said.

Nationals candidate for Whitlam Katrina Hodgkinson said she would continue "dedicated opposition" to the proposal. "There has been little community consultation and the project still doesn't have environmental approvals, despite being on a whale migration path," she said. Previously, the Mercury asked independent whale experts about the potential impacts resulting from an offshore wind farm. They said it would be minimal. "The Nationals have also long stated we have time to plan and pause, rather than Labor's all-renewables approach which will destroy the very thing it is meant to protect - the environment," Ms Hodgkins said.

Image: BlueScope in Port Kembla. Picture by Adam McLean

BlueScope steel to be used in Gippsland Zone

Alongside the pause came the announcement the Gippsland zone had partnered with BlueScope to "investigate the potential for steel plate" manufactured in the Illawarra to be used in the construction of the turbine foundations. Local community group Good for the Gong welcomed the partnership. "We look forward to working with the applicant for the Illawarra project to ensure that

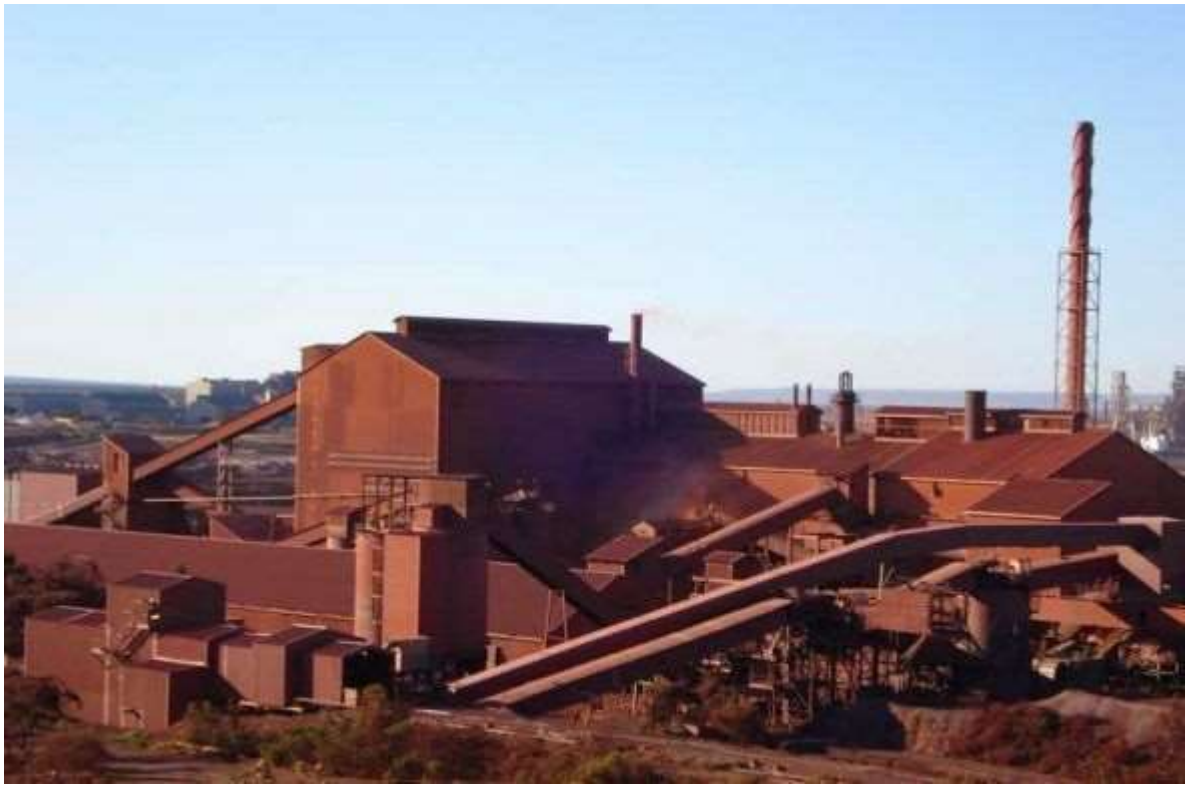
the Illawarra can also reap the benefits of an offshore wind project located here," the group said. "We're delighted that local Illawarra workers will be making key components for these projects, following the announcement of the partnership between BlueScope and the Gippsland offshore wind project. "Our region is uniquely placed to play a key role in Australia's clean energy future. We hope to see the Illawarra project also moving to the next stage as soon as possible."

Green iron fund will lay foundations for Australia to become renewable energy superpower

28 February 2025

Green iron fund will lay foundations for Australia to become renewable energy superpower | RenewEconomy

The Albanese government has announced a landmark package to salvage the beating heart of South Australia's steel industry and provide the necessary, strategic public intervention to future-proof and catalyse the region's transition to a nation-leading green iron and steel hub. Building on the federal government's $2 billion Aluminium Production Tax Credit announcement to decarbonise the energy demand of the nation's aluminium smelters – the largest source of emissions in the aluminium supply chain – the $1bn Green Iron Investment Fund leverages strategic public capital to crowd in private investment into value-added green iron projects.



Comparatively, iron is the largest source of emissions in the steel value chain, with blast furnaces accounting for up to 87% of traditional, coal-based steel emissions. Climate Energy Finance (CEF) has continued to emphasise the critical importance of getting moving and supporting first-of-a-kind (FOAK) capital deployments to learn-by-doing in the domestic context. The rescue and re-

industrialisation package announced on Thursday is exactly that. Whyalla is strategically important for Australia for its manufacturing capacity and highly skilled workforce. It is imperative that we protect and build upon our sovereign capabilities, and massive investment, employment and export potential to lead the world in shifting to green steel supply chains.

As Climate Energy Finance (CEF) emphasised in its submission to the Senate Inquiry into the Future Made in Australia's (FMIA) Production Tax Credits Bill, Australia's iron ore exports generated $138 billion in revenues in 2023-24, the largest fuel and resource industry in Australia by volume and value. The introduction of the FMIA's critical mineral and hydrogen tax incentives were a result of the government's recognition that public intervention to alleviate the cost premium of value-adding was vital to addressing market failures and developing industrial capabilities critical to the economic resilience and security of Australia.

However, failure to extend such measures to facilitate the creation of a domestic green iron industry would be the single biggest risk to Australia in the global transition to a decarbonised economy, and would be the single biggest opportunity of Australia this century if Australia captured this value. As such, CEF applauds and celebrates the ambition of the federal and South Australian (SA) governments to introduce an intergenerational industry policy that supports the long-term future of Australia's economic prosperity, and the long-term future of the planet. The announcement of a joint industrial policy package from the federal and SA government, including the commitment to invest into the necessary enabling infrastructure to support the transition to low-emission iron and steel production, can lay the foundation and blueprint for the development of Renewable Energy Industrial Zones (REIZ) for green iron production.

The success of onshoring a large-scale green iron industry will, in part, be dependent on leveraging economies of scale and public-private partnerships in enabling infrastructure, including high-voltage transmission corridors, energy firming capacity, port facilities and hydrogen pipelines. The Whyalla Steelworks is perfectly positioned to develop a REIZ, with high-grade magnetite reserves, a deep-water port, high renewable penetration in the existing electricity grid, and an established, skilled workforce. This presents a massive opportunity to learn-by-doing in order to support the development of other future-facing resource hubs in Australia, including Gladstone, the Oakajee Strategic Industrial Area (SIA), Port Hedland SIA, and so on.

As Springmount Advisory also emphasised in its advocacy for the creation of a green iron industrial package: Despite the natural advantages, Australia is lagging significantly behind other regions in terms of supportive policy settings and is suffering from significant under-investment relative to our potential compared to other regions. The federal government urgently needs to send a clear signal to industry and investors that the FMIA program will help establish a large-scale green iron industry.

This week's announcements have introduced the price signals required to industry, and to new entrants that the state and federal governments recognise the scope and scale of this immense opportunity. The announcements build on the critically important supply-side incentives introduced via the more than $22bn Future Made in Australia legislation and other industrial packages to kickstart value-adding of strategic metals and minerals, including:

- The legislated $2/kg clean hydrogen production tax incentive to scale the production of renewable-powered hydrogen to embed decarbonisation in value-added resources onshore;
- The 10% critical minerals production tax incentive, providing a tax offset in proportion to the level of expenditure of value-adding key, future-facing minerals for the energy transition, including lithium, nickel, rare earths, etc;
- $3.4bn investment into Geoscience Australia to accelerate the discovery of resources;

- The doubling of Hydrogen Headstart to $4bn, bridging the commercial gap between market prices and the green premium for early movers in hydrogen production and clean energy industries.

CEF also recognises the strength and long-term vision of the SA government to force the GFG Alliance's Whyalla Steelworks intro administration this week. CEF, national and international media have continued to highlight the increasingly dire financial situation of the global GFG Alliance portfolio, and the risk to Australia's future as a sovereign steel producer that would be realised with the continued governance and operation under Sanjeev Gupta. CEF endorses the move by SA Premier Peter Malinauskas, and supports his Government's commitment to the long-term prosperity of the Upper Spencer Gulf as the first mover for green iron, and the positive impact it will have on accelerating investments in the broader national landscape.

Now that the Steelworks is no longer under the control of GFG, the state government can partner with the federal government and make the long-term investments necessary to secure the future of Whyalla and Australian steelmaking. As CEF formulated in its recent Green Metal Statecraft: Forging Australia's Green Iron Industry report, there are key, interconnected pillars required to be jointly developed by the federal and state governments to develop a globally competitive Australian green metals industry.

The deployment of a complementary mix of financing and budgetary measures for supply-push and demand-pull market mechanisms, deployed as a coherent strategy can form the basis of Australia's green metal statecraft, including:

- A national green iron and steel strategy with clear, measurable targets.
- Demand-side incentives, including: Development of a trilateral, government owned Clean Commodities Trading Company; Australasian Green Iron Corporation JV between Australia and key trading partners like China – Australia's largest iron and steel trading ally; public procurement for green metals to create a national demand signal, and; contracts for difference (CfDs) to bridge the gap between market prices and the green premium for early movers.
- Supply-side incentives, including: $20bn Future Fund mandate for renewables-powered green metals processing. The $1bn Green Iron Investment Fund is a positive first start; Production tax credits for green iron, and; exclusion of state investment in fossil fuel-powered onshore strategic metals refining.
- Measures to address technical challenges, including: $500m over 10-years to the CSIRO for RD&D to accelerate commercialisation of green iron technologies
- Measures to improvise international collaboration and foreign policy, including: A DFAT & Austrade mandate to build collaboration on an Asian Carbon Border Adjustment Mechanism, creating a premium price signal for green iron; A focus on Australian/Asian steel supply chain decarbonisation collaboration to champion Asia-Pacific's opportunities leading up to COP31.
- Accelerating renewables deployment, including: Overriding Public Interest Test to speed renewable energy project approvals; industrial demand response mechanisms to optimise renewables supply/demand; renewables investment conditional on community benefit/First Nations benefit sharing, and; accelerated development of Renewable Energy Industrial Precincts.

As the Smart Energy Council has put it, Thursday's announcements mark the moment Australia's mining, manufacturing and renewable energy industry enter the global race towards decarbonisation. A Green Iron Investment Fund is exactly what Australia needs to lay the foundations for Australia becoming a Renewable Energy Superpower.

Labor commits $500 million to build wind turbines with Australian steel

24 February 2025

Labor commits $500 million to build wind turbines with Australian steel | Illawarra Mercury | Wollongong, NSW

Image: Prime Minister Anthony Albanese at BlueScope on February 14. Picture by Anna Warr

The wind farms that could one day be erected off the coast of the Illawarra may need to be made with locally-made steel and aluminium under a new plan announced by the Albanese government. Visiting the Illawarra on Friday, February 21, Prime Minister Anthony Albanese told Labor Party members he would set aside $500 million from the $1.7 billion Future Made in Australian Innovation Fund to scale up manufacturers to support the growing clean energy industry. Previously, Energy and Climate Change minister Chris Bowen declined to guarantee a local steel content quota in offshore wind turbines proposed for the Illawarra. Now, Labor says the steel sector and associated industries employ more than 10,000 Illawarra residents.

With a single wind turbine requiring hundreds of tonnes of steel, the party says "why shouldn't that be from Port Kembla?" Carol Berry is the new Labor candidate for Whitlam in the Illawarra NSW, replacing Assistant Treasurer Stephen Jones. "Local content requirements - the requirement for governments to buy local - must be stronger and work better," Mr Albanese said at a dinner in Dapto on Friday night. The fund could also be used to manufacture clean energy technology, including battery and storage technologies, hydrogen electrolysers, and other critical components like cables, Labor said. Mr Albanese said the Labor government would "always stand up for Australian steel and Australian aluminium". "We will always stand up for Australian jobs and Australian industries," he

said. "We will back Australian industry to compete and succeed, so we can create the next generation of good local jobs."

Image: Prime Minister Anthony Albanese alongside candidate for Whitlam Carol Berry and outgoing member for Whitlam Stephen Jones at WIN Stadium on February 21. Picture by Adam McLean

Federal Member for Cunningham Alison Byrnes said the Illawarra had been "built on steelmaking". "Our government is determined to secure that legacy by strengthening local content requirements and creating new opportunities in green metals and clean energy manufacturing," she said. "Over the past three years, we've put our Future Made in Australia strategy into action. "Now we're focused on bringing its benefits directly to workers and communities - including those in the Illawarra." The plan to use locally made materials in renewable energy projects was unveiled after Labor announced $13.6 million in federal funding for the Dragons' high performance centre at Fairy Meadow .

The week before, Mr Albanese was in the region to formally announce Carol Berry as the new Labor candidate for Whitlam and also visited BlueScope. During this first visit, the Prime Minister was heckled by anti-wind farm protesters. Ms Berry said, in the coming election, "The Albanese Government is backing Australian steel and local jobs". "Peter Dutton's nuclear energy plans will deliver nothing for our region," she said. "I'll fight to keep all local jobs secure, including jobs at Port Kembla steelworks, if I'm fortunate enough to be the next Member for Whitlam."

Community benefits

Community group Good for the Gong welcomed the announcement, which representative Madeleine Holme said had them "stoked". "We want projects that meet a really high standard in terms of environmental considerations, but also that the community can benefit from this in as many ways as possible," she said. "It's not just the wind turbines. The Illawarra has been designated a renewable energy zone, so there's been a lot of focus on offshore wind because that would be a really big project. "But, there's also scope within that to look at other kinds of projects, whether it's

community batter projects or some stuff happening around green gravity." Ms Holme said she hoped any project involved the community. "We're really supportive of renewable projects generally, so whatever will hasten this shift to renewables," she said. "As long as it's done in a way that involves community consultation, so the community feels it is a part of the process. "I think it's a really encouraging sign that not only would it be really good environmental impacts from these projects. "But, if we are also able to make that there's local jobs and support for big businesses, but also the small and medium businesses in our region, that would be really encouraging as we transition away from coal mining and the history our region has."

What do the new tax credits for critical minerals and green hydrogen mean?

11 February 2025

What do the new tax credits for critical minerals and green hydrogen mean? - ABC News

Image: Critical minerals producers will be able to claim a credit priced at 10 per cent of the costs of processing and refining minerals. (Supplied: Vanadium Resources)

After months of wrangling, the federal government's production tax credits for the green hydrogen and critical minerals sectors have passed the parliament. This was one of the key planks of the government's last budget, offering billions of dollars in support for both sectors. The support is a bit unusual in its design — unlike the grants or loans that governments often hand out to support different industries, tax credits are paid after the product is delivered. That way there is less risk that taxpayer funds are poured into projects that never eventuate. The idea has been a bit politically sensitive.

The Coalition has criticised the support for the green hydrogen sector, arguing that for all the noise about green hydrogen, the industry is so far a fantasy that may never become a reality. But the government has attacked the Coalition for opposing support for the critical minerals sector, pointing

to the sectors' repeated calls for this kind of support — and hoping the message cuts through in the resources-reliant state of WA. Here's a quick guide on how production tax credits are going to work.

Critical cash for critical minerals

For some time there has been a strong push for Australia to get more involved in processing and refining critical minerals, rather than just mining them. While Australia is very good at mining critical minerals, most of the raw material is then sent offshore to be refined. It's seen as not just an economic problem, but a security issue too — given the bulk of the world's rare earths are processed in China. Production tax credits are designed to give the sector a bit of a leg up.

Image: Resources companies would only be able to claim credits after producing green hydrogen or critical minerals. (ABC News: Supplied: VHM)

Any company that refines any of the 31 minerals currently on the critical minerals list — like nickel, lithium, cobalt and manganese — is entitled to a tax credit to help cover their costs. That tax credit will be 10 per cent of the cost of processing and refining the minerals, up to a certain level of purity. It's something parts of the resources sector have been seeking for quite some time. The Association of Mining and Exploration Companies labelled the passage of the bill "monumental", and expected it will "stimulate billions in new investment" in the sector. The support is uncapped, but the budget estimated the cost at $7 billion "over the medium term". It is available from mid-2027, and can be claimed right until the end of the next decade.

Coalition points to alternative plans

When the production tax credit plans were first announced in the budget last year, the response from the Coalition was pretty swift. "Fifteen billion for billionaires to dig minerals out of the ground," was how Peter Dutton characterised it on ABC News Breakfast the morning after the budget. And the Coalition has remained firm on that opposition since then, despite some pressure from parts of the resources sector. The Coalition has pointed to problems with what it labels as the

"fundamentals" as its priority in supporting the critical minerals sector. That largely means industrial relations changes, which it argues have been doing damage to the sector.

WA Liberal senator Dean Smith made the case during debate in the Senate yesterday. "I totally understand how industry is excited about a tax credit. Why wouldn't they be? That is the normal style of operating a business when the government puts a lucrative financial offer in front of it," he said. "What we're saying is that the approach is wrong because it doesn't tackle — it doesn't even seek to go near tackling — the key contributing factors to high project costs for manufacturing and minerals processing in this country." And the Nationals leader, David Littleproud, hinted at a policy pitch in the works from the Coalition in a press conference. "We'll be making an announcement, our own announcement, about where we think some opportunity lies," he said.

Image: Nationals leader David Littleproud hinted that the Coalition had its own proposal to support the critical minerals sector. (ABC News: Luke Stephenson)

A path to a green 'superpower'

The other big plank of the budget package last year was an estimated $6.7 billion in support for a new green hydrogen industry. It would work in a very similar way to the critical minerals support — for every kilogram of green hydrogen produced in Australia, a $2 tax credit can be claimed.

Hopes for green hydrogen fading. A project held up as a flagship for Australia's fledgling green hydrogen industry losses its biggest backer as Origin Energy walks. Right now there is no green hydrogen being produced in Australia, and very little around the world, but the industry is hoping to scale up rapidly. Green hydrogen can be used for a few different purposes, like helping decarbonise the steel industry, or being used to create green ammonia. Dr Fiona Simon from the Australian Hydrogen Council said the tax credits will 'keep Australia in the race' on green hydrogen. "There is no 'do nothing option' when it comes to hydrogen. We need it as a large-scale option for decarbonising energy that requires molecules, and we need it as a chemical solution to produce commodities like

green iron," she said. "And we also need to remain a trusted energy partner across Asia and the export of molecules is critical to Australia's ongoing prosperity."

Image: Fiona Simon said production tax credits would save Australia's hydrogen industry from falling behind.

While there have been hopes green hydrogen would help Australia become a renewable 'superpower', the industry has seen a few significant setbacks of late. Energy giant Origin pulled out of plans for the country's largest green hydrogen plant last year, and Fortescue pulled back on its ambitions for the sector a few months prior. Just last week, the Queensland government pulled its support for a major hydrogen project in Gladstone. The production tax credits model means that if the sector can't get off the ground, the expected $6.7 billion in support will stay in taxpayer hands. The government says the production tax credits are central to its vision of a 'Future Made in Australia' — but the billions in support it's offering will only flow once that future starts being made.

Hysata inks major electrolyser deal for Saudi green hydrogen

11 February 2025

https://esdnews.com.au/hysata-inks-major-electrolyser-deal-for-saudi-green-hydrogen/

Australian electrolyser whizkid Hysata has inked a major agreement with ACWA Power to deliver commercial scale demonstrations of its high-efficiency capillary-fed electrolysis technology in Saudi Arabia. The agreement will accelerate the development of Hysata's high efficiency electrolysers and leverage ACWA Power's significant expertise in large capital projects, which includes its 2.2GW NEOM green hydrogen project in Saudi Arabia.

NEOM is the world's largest, utility-scale hydrogen project, which is already over 60% complete and is expected to produce 600 tonnes of hydrogen daily once fully operational in 2026. This agreement includes a commercial scale demonstration of Hysata's technology in Saudi Arabia which is the first step in their commercial pathway towards deploying large-scale high-efficiency electrolyser systems in ACWA Power's projects. Hysata CEO Paul Barrett said, "Hysata is delighted to partner with ACWA Power, a pioneer in the region's power generation, desalination and green hydrogen sector. We were especially attracted to their pipeline of large-scale green hydrogen projects with strong offtakes, their deep expertise across the energy supply chain in the Middle East, and an impressive ability to execute large-scale projects at a rapid pace. "Green hydrogen through its use as a chemical feedstock is critical for decarbonising heavy industry and for creating new export markets for products such as green iron, steel, and green ammonia.

Image: Gerry Swiegers, Scott Abrahamson, Paul Barrett, Tom Campey and Leanne Isabella

The Middle East offers all the ingredients to be a green hydrogen leader with low cost and abundant renewable capacity, ambitious hydrogen investments and attractive incentives for manufacturing. "The region's rapid progress in the sector is also thanks to the strong vision from companies like ACWA Power. "Compounding these advantages, Hysata's industry-leading efficiency, simplified balance-of-system, and design for high-volume manufacturing creates an unmatched LCOH advantage for our customers, leading to a strong business case for green hydrogen."

Pure Hydrogen Delivers Hydrogen Fuel Cell Truck to Waste Management Company

6 February 2025

https://fuelcellsworks.com/2025/02/06/fuel-cells/pure-hydrogen-delivers-hydrogen-fuel-cell-truck-to-waste-management-company

- Australia's first hydrogen fuel cell rear loader garbage truck delivered to Solo Resource Recovery, marking a significant milestone in the clean energy transition

- The Solo Resource Recovery Open Day attracted significant interest from councils across Victoria, showcasing growing demand for hydrogen-powered waste collection solutions
- Receipt of ADR (Australian Design Rules) approval, allowing for any vehicle of this type to now be registered in Australia
- The truck will commence operations initially with the City of West Torrens Council in Adelaide, South Australia, following its launch in Victoria.
- The handover is a key achievement in Pure Hydrogen's ongoing vehicle rollout strategy to promote sustainable waste management and reduce carbon emissions.

Image: Representatives from Pure Hydrogen, HDrive International and Solo Resource Recovery at the Open Day in Clayton South, Victoria

Australian clean energy company Pure Hydrogen Corporation Ltd (ASX: PH2) ("Pure Hydrogen" or "the Company") is pleased to announce the successful handover of Australia's first hydrogen fuel cell (HFC) rear loader to Solo Resource Recovery ("Solo"), a leading Australian waste management company. The vehicle handover took place this week during the highly successful Solo Resource Recovery Open Day, held in Clayton South, Victoria. The event featured a live demonstration of the truck's impressive performance and its potential to significantly reduce emissions in the waste collection industry. The event was attended by numerous key representatives from local councils in Victoria, who showed strong interest in adopting hydrogen-powered vehicles for waste management operations.

The truck will be deployed in Adelaide, South Australia, with operations scheduled to begin with the City of West Torrens Council. The Council is a client of Solo Resource Recovery, which provides waste and resource recovery services to councils, businesses and industries in New South Wales, South Australia, Queensland, Victoria and Western Australia. The delivery of the HFC truck supports the

City of West Torrens' stated goal of leading the way in sustainable energy alternatives for municipal services, including waste management. The HFC waste collection truck launch marks a significant step forward in Pure Hydrogen's ongoing vehicle rollout strategy, aimed at promoting the adoption of clean hydrogen-powered vehicles and capitalising on a first-mover advantage in this fast-growing sector. The Company confirms that it has received Australia Design Rule (ADR) approval for this type of truck, meaning it does not need to repeat the approval process for the same model of HFC waste collection trucks and can automatically register new vehicles of this type. The delivery of the waste collection truck follows comprehensive testing, in line with the sale agreement between Pure Hydrogen and Solo in April 2024 (refer ASX Announcement 22 April 2024).

Pure Hydrogen's Managing Director, Mr Scott Brown, commented: "The delivery of the hydrogen fuel cell waste collection truck is another important step in our continued efforts to expand the adoption of zero emission vehicles within Australia's heavy transport industry. The sale agreement with Solo follows an extensive period of collaboration, and we are proud to support the City of West Torrens in its commitment to sustainable energy solutions for waste management."
"The strong interest shown by local councils at the event underscores the growing demand for sustainable energy options, particularly in the waste management sector. Beyond zero CO2 emissions, hydrogen vehicles offer significant advantages, such as their quieter operation, which reduces noise disruption for communities. The company continues to make substantial progress in the development and deployment of zero-emission vehicles as part of its broader strategy to support the transition to clean energy. We are pleased to see this truck begin operations in South Australia and look forward to expanding the adoption of these vehicles nationwide."

About Pure Hydrogen Corporation Limited
Pure Hydrogen is a clean energy-focused company seeking to become the leader in the development of Hydrogen and Energy Projects through the use of cutting-edge technology processes. It plans to supply hydrogen fuel to both Australian customers and regional Asia Pacific markets, through the production of Green, Emerald, and Turquoise Hydrogen. Concurrently, the Company is developing natural gas projects directly in Australia and Botswana and through a strategic investment it holds in a Botswana- focused energy company listed on the Australian Securities Exchange. Strategically, Pure Hydrogen will also prioritise incubation for early-stage companies or projects within the clean energy sector, with the aim of realising profits from those investments. For further details visit www.purehydrogen.com.au

ASEAN Heads of Mission and Consular Corp Delegation Visit

6 February 2025

The ASEAN Heads of Mission and Consular Corp delegation visited the region on the 6 February 2025. A highlight of their visit was a Port Kembla Hydrogen Hub Tour led by Nigel McKinnon, Deputy Director, Department of Primary Industries and Regional Development and Chair of the Port Kembla Hydrogen Hub. The delegation visit provided an opportunity to showcase the region's innovation and economic potential in areas such as clean energy, advanced manufacturing and education with a focus on fostering international partnerships.

Hosted at the UOW Innovation Campus, the ASEAN delegation included Heads of Mission, Consular Corps members and senior NSW government representatives from Investment NSW. Delegation members were joined by local industry leaders and representatives from the University of Wollongong for a series of sessions where opportunities in trade, investment, and partnerships were discussed. Anoulack Chanthivong MP, Minister for Industry and Trade and Investment provided

opening remarks at the UOW event and was joined by Paul Scully MP, Minister for Planning and Member for Wollongong in welcoming the guests to the region.

Image: ASEAN delegation members at University of Wollongong

Port Kembla Hydrogen Hub

Minister Chanthivong joined the ASEAN delegation for a tour of the the Port Kembla Hydrogen Hub precinct. The tour detailed the precinct's central role in advancing Australia towards a low-carbon emissions economy. The delegation visited the Coregas Hydrogen Refuelling Station, Australia's largest hydrogen refueller and learned about opportunities for green energy from offshore wind and the Renewable Energy Zone that will link the region to large renewable generation in South West NSW. The delegation also heard about BlueScope's green steel ambitions and BOC's plans to establish 650MW in green hydrogen capacity at Port Kembla.

Korean Hydrogen Supply Chain Delegation Visit

5 February 2025

The Korean Hydrogen Supply Chain delegation visited Australia in early February and was headed by Hyoung Kwon Ko, the former Permanent Representative of Korea to the OECD and Former Korean 1st Minister of Economy and Finance. The delegation was made up of representatives from the Korean Energy Economics Institute, H2Korea and the Korean National Oil Corporation. The delegation met with a range of key hydrogen stakeholders during their initial visit to NSW. The delegation was keen to understand NSW's hydrogen supply chain competitiveness through innovation and research.

Image: Members of the Korean Hydrogen Supply delegation in Sydney on 4 February to launch the initiative between Korea and Australia.

This initial visit is the first visit of three planned visits before the end of September to ensure the research project is on track. The Korean Hydrogen Supply Chain delegation visited Port Kembla on the 5 February 2025. Their visit was hosted by the Port Kembla Hydrogen Hub.

From a building in the steelworks to the world: How Green Gravity is leading large-scale energy transition

30 January 2025

https://regionillawarra.com.au/from-a-building-in-the-steelworks-to-the-world-how-green-gravity-is-leading-large-scale-energy-transition/50019/

Mark Swinnerton's first job was at Port Kembla Steelworks so it's only fitting that the company he founded, Green Gravity, has found its home in a disused steelworks building. Mark grew up in Canberra but moved to the Illawarra to attend the University of Wollongong. He started at Port Kembla Steelworks as a materials engineering cadet working in the production department at the BOS. "I always wanted to be a civil engineer, my family had a history of engineers and it kind of appealed to me," Mark said. "I liked infrastructure and the built environment so I figured civil/structural engineering was right for me. "Of course, in the end my dad convinced me that getting paid by BHP to go to uni was a better idea than being a full-time student!"

Mark, the founder and CEO of Green Gravity, will be guest speaker at The Illawarra Connection's (TIC) first dinner meeting of the year, on Tuesday 4 February. He'll be talking about some of the challenges of the renewable energy transition and demonstrate how the Illawarra has a rare set of circumstances to lead the world in new technology at scale. Green Gravity opened its research and development facility Gravity Lab at the steelworks in July 2023, including the construction of a 12-m prototype. "Green Gravity exists to radically accelerate the world's renewable transition," Mark said. "Our simple technology lets us store excess energy by lifting heavy objects up a mine shaft during the day, then releasing that energy by lowering them down at night. "The energy just changes its form from potential energy when we lift the object, to kinetic energy when we lower the object. "Solar energy is cheap and plentiful, but it is only available when the sun is shining. "We need to take part of the solar production and store it to use at night. Green Gravity has a technology that is low-cost, long life and very sustainable to move solar to when we need it. "We've spent two years in Wollongong developing a technology that we are now increasingly convinced can make a radical change to our future climate."

After eight years at Port Kembla where Mark worked across the steelmaking and slab yards, he moved to WA and worked in the iron ore mines for a few years. In WA's Pilbara he helped solve logistics problems for the iron ore division by changing the shape of ship hulls. He held senior white-collar roles in BHP's Singapore marketing and economic analysis teams, before returning to Australia to manage one of BHP's Queensland coal mines.

Image: Green Gravity's Gravity Lab at the steelworks. Photo: Region.

It was while he was BHP's chief economist based in Singapore that he became deeply interested in green energy. "It was at that time I had access to incredible depths of analytics and there was a simple conclusion to make – the world is way off target for addressing climate change," he said. "By the time COVID came around, I determined that the situation was no better, and that more people needed to take more accountability – which should include me. "Two things came together for me in 2021. There was lots of media about the Snowy Hydro scheme – which is where renewables are

stored by lifting water up a hill. “There was also a Senate enquiry into the national status of mine rehabilitation, and it found that only five of about 100,000 legacy mines have been fully rehabilitated. “This got me wondering what all of the other 99,995 old mines were doing – but also what other ways could you apply the principles of Snowy Hydro but not need to flood vast valleys.”

In well under five years, Green Gravity has made huge inroads in both the domestic and international markets. “We’re working with the Federal Government of Romania to help the transition of coal mining regions using our technology, right through to Far North Queensland where we are working with the city of Mount Isa and Glencore to understand how we can repurpose mine shafts in that region to bring renewable energy to northwest Queensland,” Mark told Invest Wollongong’s #MadeInWollongong Business campaign in December. “We’ve been able to show that clean energy technology can be developed in regional Australia, can be deployed in regional Australia, and ultimately we can change the world with these technologies.”

Mark said the company was about two-thirds of the way through preparing the technology for commercial application. “We are gearing up to do our final demonstrations, which will be in a deep mineshaft, and are working with our first customers on the feasibility studies to be able to deploy the tech at large scale into the grid,” he said. “We are working with 45 mining companies globally and have access to 75 mineshafts currently. We are actively engaged in five countries, but we are focussed on getting the technology launched first in Australia.”

And the future is bright for the company, which last year was named on Cleantech Group’s prestigious 2024 Cleantech 50 to Watch. The annual list highlights 50 early-stage companies from across the globe that are creating groundbreaking solutions to address some of the world’s most pressing environmental and sustainability challenges. “In five years, Green Gravity will have large-scale energy storage systems working in the grid across east Australia,” Mark said. “We will be making investments in assets in Europe, North America and India, and we will be exporting technology and key knowhow from the Illawarra.”

While Green Gravity takes up much of Mark’s time, when he does get to relax he enjoys spending time with his wife and four children at home in Bulli. The Illawarra Connection, which celebrated 30 years in 2023, aims to foster connections, inspire collaboration and drive business innovation in the Illawarra region. The organisation holds six black-tie events throughout the year, designed to engage, educate and inspire members.

Contact

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