

1 August 2025

Greetings hydrogen hipsters from a sunny but cool Port Kembla! This **Port Kembla Hydrogen Hub Update - Edition #34** contains information on the following key projects and initiatives:

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Previous editions of the **Port Kembla Hydrogen Hub Update** newsletter are available <u>here</u>. Follow us at Port Kembla Hydrogen Hub on LinkedIn for more updates.

Step aside petrolheads, this Wollongong grand prix was all run on hydrogen

26 July 2025

<u>Hydrogen-powered grand prix revs up Illawarra students at UOW.</u> | <u>Illawarra Mercury</u> | <u>Wollongong</u>, NSW

Petrolheads, step aside - the motorsport "grand prix" held at the University of Wollongong this week was all powered by the next great hope for green fuel: hydrogen. Called the <u>H2GP</u> (hydrogen's chemical formula is H2), the event featured 16 schools, many from the Illawarra and South Coast regions, in a four-hour endurance race for remote-control cars. Each team had built their own car from a kit with only basic instructions provided, then tested them at their school before converging on UOW for the big race, Corrimal High School team member Keo Booth said. "This is where teams from high schools, up and down the South Coast and over into the Highlands, are competing with hydrogen-powered fuel cell remote control vehicles that they've built themselves from kits and modified in various ways," said Ty Christopher, director of the Energy Futures Network at UOW.



Image: Engines ready at the starting line.

"[That's] to compete in an endurance race, but also to show how they can innovate with engineering of hydrogen powered vehicle. "All these students here are currently school students, but they're the engineering students of the future. "It's so exciting [to] hear from all of these young people and these students and to hear their passion and to hear how much they've learned on their journey of building these hydrogen-powered cars. "These are the STEM engineers, the scientists, the environmental scientists, and even, yes, the team managers and the project managers of the future that Australia needs for a sustainable clean energy future."



Image: Shellharbour Mayor Chris Homer (left) with the Lake Illawarra High School Racing team at UOW. Picture supplied

Shellharbour Mayor Chris Homer was there supporting the Lake Illawarra High and St Joseph's teams. "It was fantastic to see our local students getting stuck into such a hands-on experience while learning more about engineering, clean energy and teamwork," he said. "You could see the pride on their faces as their cars hit the track. "Programs like this help students build real skills, understand how sustainability and engineering work in everyday life, and think about future career pathways."

For the record, the grand prix was won by Warners Bay High School from Lake Macquarie. The highest placed local team was Bomaderry High, which came fourth.

'Pivotal moment': the five-stage plan to creating 1500 jobs in the Illawarra

10 July 2025

15,000 jobs by 2050: Illawarra's green energy plan to become hub | Illawarra Mercury | Wollongong, NSW



Image: Paul Scully MP, Coralie McCarthy and Ty Christopher at the Clean Energy Roadmap event. Picture by Robert Peet

The Illawarra's clean energy transition has the potential to create up to 15,000 jobs by 2050, according to a new report by Business Illawarra. The Illawarra Clean Energy Industry Roadmap outlines a five-stage strategy to position the region to be Australia's leading hub for green manufacturing by 2050. Stage one of the policy is to develop policies related to clean energy and to engage with the community to ensure long-term stability, and to avoid opposition, which could cause delays. "This is a pivotal moment for our region," Director of Business Illawarra, Coralie McCarthy, said. "The roadmap lays the foundation for Illawarra to lead the nation in clean energy innovation, driving economic growth and opportunity across the entire region.

The report also outlines economic gains for the Illawarra region, which includes up to 15,000 direct and indirect jobs and the injection of up to \$15 billion into the NSW economy over the next two decades. The roadmap was developed by the Energy Futures Network at the University of Wollongong (UOW). "This roadmap is a critical step in aligning our region's strengths with the demands of a clean energy future," Ty Christopher, Director, Energy Futures Network & Innovation and Commercial Research, at UOW, said. "Through deep collaboration with industry, we've mapped out the pathways for Illawarra to lead Australia's energy transition. We're excited to see this important work launched and to begin the journey of turning vision into reality." Challenges highlighted by the report include supply chain bottlenecks, infrastructure limitations (including the need for upgraded transmission lines and hydrogen storage) and high cost of living and housing shortages.

Wind in focus

The offshore wind zone is highlighted in the report, with an offshore wind zone potentially creating 6,000 jobs during the construction phase and up to 1,000 permanent jobs in long-term operations. Every direct job in offshore wind could create two indirect jobs in supporting industries. "The declaration of a 2.9GW offshore wind zone in Illawarra is projected to bring significant economic gains," the report said. "The construction of offshore wind farms could inject \$2.5 to \$3 billion into the regional economy. "Once operational, offshore winds farms are estimated to contribute \$300 million to \$500 million annually to the Illawarra economy."

The full Clean Energy Industry Roadmap

Stage 1 - Policy Development and Community Engagement

Stage 2 - Infrastructure and Workforce Development (2030+)

Stage 3 - Industry Enablement and Diversification (2030-2040)

Stage 4 - Service and Maintenance Hub (2035-2045)

Stage 5 - Advanced Manufacturing and Clean Energy Export Hub (2040-2050)

Green hydrogen powers back up with major funding

4 July 2025

Green hydrogen powers back up with major funding | Illawarra Mercury | Wollongong, NSW

A major green hydrogen project has secured federal backing days after one of the biggest proposals to produce the clean fuel fell over. The Commonwealth financial support for the Hunter Valley facility will allow it to make the switch from hydrogen made with gas, a fossil fuel, to renewable energy. Funding of \$432 million for the Orica facility was allocated under the federal government's Hydrogen Headstart program, which provides credits for the manufacture of the clean fuel.

The \$2 billion grant program, delivered by the Australian Renewable Energy Agency, aims to build scale across green hydrogen production and so drive down costs over time. Australia wants to become a global leader in green hydrogen to power heavy industry and long-haul trucks, and to produce green metals such as iron - all key to meeting global decarbonisation targets and tackling climate change. But the fledgling sector has struggled to find its feet.

One of the biggest proposals in the nation, Gladstone's \$14 billion Central Queensland Hydrogen Project (CQ-H2), was officially scrapped this week after the state government withdrew its support.

Federal Energy Minister Chris Bowen acknowledged the headwinds faced by the renewable hydrogen industry but said his government was rising to the challenge. "It's in the hard basket, not the too hard basket," he told reporters on Friday.

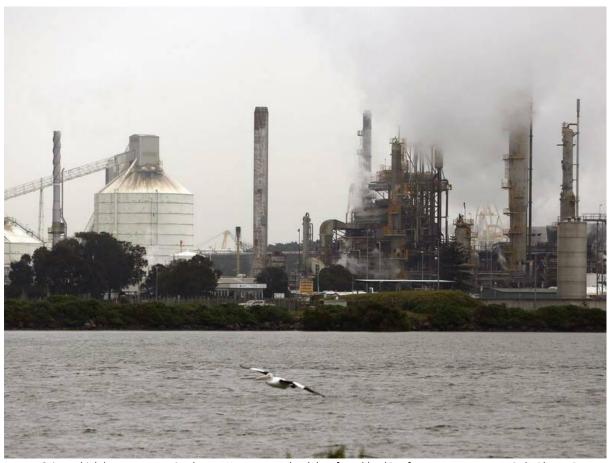


Image: Orica, which has an ammonia plant at Kooragang Island, has found backing for a green energy switch. Photo: Darren Pateman/AAP PHOTOS

The failed Gladstone project was a disappointment, Mr Bowen said, pointing a finger at the Queensland government rather than private sector investors. Queensland Treasurer David Janetzki has described the Gladstone project as "speculative in nature" and said he "didn't want to see the precious taxpayer dollar tipped into it". The federal incentives for the Hunter Valley project will go towards a 50 MW electrolyser powered by renewable energy on the Kooragang Island site, capable of producing about 4700 tonnes of green hydrogen each year to support regional jobs in low-carbon industries.

Hydrogen is used to make ammonia, important in fertiliser production, so the shift to a clean fuel will allow Orica to cut emissions from its ammonia facilities. It will also open the region to opportunities to export clean hydrogen and ammonia. Clean Energy Council general manager of advocacy and investment Anna Freeman applauded the government's commitment to getting "complex and challenging" renewable hydrogen projects off the ground. "We urgently need to drive down the cost of this renewable fuel to support Australia's decarbonisation plans," Ms Freeman said.

Illawarra offshore wind hanging by a thread as BlueFloat considers selling its interests

3 July 2025

Illawarra offshore wind project may lose its sole developer. | Illawarra Mercury | Wollongong, NSW

Development of offshore wind in the Illawarra is hanging by a thread as the sole company interested, BlueFloat Energy, is considering selling up its Australian interests. Spanish wind energy firm BlueFloat was the only developer to apply for a feasibility licence for the Illawarra Offshore Wind Zone, but in February it was revealed the company had asked for its assessment to be "paused" until after the federal election. Despite a landslide win in the May election to pro-offshore wind Labor, BlueFloat has not asked for its feasibility assessment to be resumed.



Image: Responsible Future Illawarra members Alex O'Brien, Amanda De Lore and Grant Drinkwater pictured as they launched their group in 2024. Picture by Anna Warr

A spokesman for BlueFloat would only say that the company is looking for funding options for its Australian projects. "BlueFloat continues to investigate funding options for its Australian projects, which includes Gippsland and Illawarra," he said. But the Mercury can confirm that selling its Australian interests is an option BlueFloat is considering. BlueFloat had earlier made it clear that the Gippsland offshore wind zone was its priority within Australia, having received a feasibility licence and major project status there. The Illawarra zone, which had not progressed to this stage, was clearly a lower priority.

The news that BlueFloat may be looking to exit Australia was met by anti-offshore wind group Responsible Future Illawarra claiming "victory" over the proposal, which it said had "collapsed". The group's Illawarra president Alex O'Brien said there was "no way" Climate Change and Energy Minister Chris Bowen could grant a feasibility licence to a company with significant uncertainty. "Given Minister Bowen has publicly ruled out subsidising offshore wind, and in light of BlueFloat's financial troubles - including staff cuts, being put up for sale, no CEO, and ongoing uncertainty - it's

clear they are in no position to deliver the Illawarra project, one of the most complex proposed in Australia," Mr O'Brien said.

"Under these conditions, it would be irresponsible for any minister to grant a license to a company with such an unstable financial outlook." While a declaration of victory appears to be premature until BlueFloat actually withdraws, Mr O'Brien said people in the Illawarra opposed to this proposal had won. "The community has done its job," he said. "We were informed, peaceful, and persistent and this is a victory for the incredible people of the Illawarra. "It's time for the government to stop hiding, respect the will of the people, and formally end this failed proposal."

BlueFloat has experienced significant upheaval this year including the resignation of its founder and CEO, Carlos Martin Rivals. BlueFloat does not appear to have appointed a new CEO, with its webpage returning an error for that section. BlueFloat's ultimate parent company, US-based Quantum Capital Group, was last year reported to have unsuccessfully tried to sell BlueFloat by divesting it from its 547 Energy investment fund. Questions also exist over the extent of NSW Government support for the Illawarra project. The NSW Renewable Energy Zone (REZ) was recently redefined to remove large projects, in particular offshore wind, and became an "urban renewable energy zone".

Multi-billion dollar green hydrogen project evaporates

30 June 2025

Multi-billion dollar green hydrogen project evaporates | Illawarra Mercury | Wollongong, NSW



Image: The plug has been pulled on plans for a project to produce green hydrogen in Queensland. Photo: Lukas Coch/AAP PHOTOS

A project once touted to produce 800 tonnes of green hydrogen a day by the end of the decade is dead following the collapse of an international consortium. The Central Queensland Hydrogen Project in Gladstone will not go ahead, with Queensland's state-owned Stanwell Corporation

confirming its end in the project. "Stanwell has discontinued its involvement in the Central Queensland Hydrogen Project (CQ-H2) project and other hydrogen development activities," the corporation said in a statement. "The CQ-H2 project has been a valuable international collaboration that has provided important technical and commercial knowledge to support the future large-scale commercialisation of renewable hydrogen."

Queensland's government announced earlier in 2025 it would not extend any further loans or grants to the project. Treasurer David Janetzki said a fundamental principle of his budget handed down last week was "respect for taxpayer money". "And I made the decision in February that that project in particular, was speculative in nature, and I didn't want to see the precious taxpayer dollar tipped into it," he told reporters on Monday. "I think ... other private sector proponents have looked at it and now the consortium has made a decision to step aside from that project." Stanwell had requested \$1 billion from the government in February to continue the project, which was ultimately rejected.

Federal Energy Minister Chris Bowen said the news comes as no surprise but expressed disappointment. "I think it's a sad day for Gladstone," he told reporters on Monday. "Hundreds of jobs that would have been created now won't be created because of that decision." The hydrogen plant and pipeline was expected to cost \$12.5 billion in 2019 before blowing out to nearly \$15 billion in 2022. Initial project estimates indicated it could deliver almost 9000 jobs and more than \$17.2 billion in hydrogen exports over its 30-year life through gaseous renewable hydrogen converted to renewable ammonia and liquefied hydrogen for export.

Electrify 2515 celebrates renewable energy conversion of 60 Illawarra homes

20 June 2025

Electrify 2515 celebrates renewable energy conversion of 60 Illawarra homes - ABC News

Scores of households have been converted to run off renewable energy in a significant step towards the goal of electrifying an entire New South Wales postcode. Tosca Lloyd is one of the lucky few to benefit from the Electrify 2515 community pilot, which has so far converted 60 homes in the Illawarra postcode. She said saving money was just as important as addressing climate change. "We see switching to renewables and electrifying as one and the same as addressing the cost of living crisis and also the climate crisis," Ms Lloyd said.

She was also motivated to get gas out of the house for health reasons because her young son suffers from a respiratory illness. Ms Lloyd installed a "really big" solar system, a large battery, converted to a ducted heating system and installed an electric heat pump. "All of that cost around \$40,000, but we only ended up being out of pocket by around \$32,000. "I think we got around \$8,000 from this program and that was the maximum we could get for our income bracket."

Another 440 households have signed up for the program.

A step towards rewiring the nation

Rewiring Australia founder Saul Griffith said the scheme was about starting small and then going big. Inventor Saul Griffith is sparking an energy revolution in Australia with a goal to create the first all-electric community. "So we know that 11 million Australian households have to get to zero emissions by probably 2040," he said. "We thought we would really try to accelerate what that looks like in one community — that was the origins of 2515. "We've had a great community response ... 500 homes out of 4,000. "That's about 15 per cent have signed up to participate."

The scheme has built-in equity measures — the more you earn, the lower the subsidy. "A really kind of fabulous thing we found out about our community is a lot of the higher net-worth families are doing it for climate reasons," Dr Griffith said. "They are actually donating back their subsidies so it can be amplified or reused by low income homes." The Australian Renewable Energy Agency (ARENA) has funded the program to the tune of \$5.4 million so far.

Endeavour Energy manages the network and its future-energy strategy manager James Hazelton said he was confident the grid could handle the added load and that customers would not face higher energy costs. "But we also want to make it clear that through the journey to electrification, while customers are going to save money by having less fuel use and gas use, they are not going to face higher network charges," he said. "We are very comfortable that it won't make the lights go out or anything like that for this trial." The network operator will closely monitor the program to determine whether improvements are required for converted households. "We're using this as a case study to understand what's the right balance of visibility and network upgrades that might need to take place," Dr Hazelton said.



Image: The battery connected to Tosca Lloyd's family home will be switched on in July. (Supplied: Electrify 2515)

Wider electrification goals

The Illawarra region, which includes the city of Wollongong and Port Kembla has become a hub for renewable development. It remains to be seen whether a proposed offshore wind farm eventuates 20 kilometres off the coast, but in May the NSW government announced that the region had become the state's first "urban renewable energy zone". Energy Minister Penny Sharpe said that meant preparations were underway for more green manufacturing opportunities, research, renewable energy storage facilities and trial of new grid technologies to improve solar uptake.

In January, federal Climate Change Minister Chris Bowen encouraged community energy projects similar to Electrify 2515 to apply for funding. ARENA has confirmed it is also funding about half of a

\$13.8m home electrification pilot for 500 homes in South Australia. "The primary project objective is to demonstrate the customer and sector benefits of demand flexibility and smart homes to help accelerate their deployment at scale," an ARENA spokesperson said.

Korea Energy Economics Institute Delegation Visit

10 June 2025

The Port Kembla Hydrogen Hub hosted a second delegation this year from the Korea Energy Economics Institute. The 35 delegates were Presidents and Vice Presidents of major Korean corporations that were undertaking courses at the Korea Energy Economic Institute. The two hour tour of Port Kembla focused on renewable energy production, hydrogen production, distribution and storage and the use of hydrogen in power generation, heavy industry, gas network injection and export.



H2 Future Mobility Day #8

29 May 2025

Gastech Engine and Energy (Gastech) has been a leader in alternative fuel technology for over 25 years. They have developed the innovative ControlR™ system that provides an affordable pathway to convert an existing diesel-powered heavy road vehicle to run on a mix of hydrogen and diesel. By using ControlR™ technology on an existing vehicle, carbon emissions can be dramatically reduced by up to 70%. ControlR™ uses a proprietary hydrogen hybrid system designed in-house by the Gastech team. It matches power and performance to the original equipment manufacturer (OEM) specifications and when hydrogen is unavailable, drivers can seamlessly switch back to 100% diesel operation from within the cabin.

The official Australian launch of ControlR[™] took place at the BlueScope Visitor Centre on 29 May 2025, with fleet operators and industry leaders from across the region and Sydney in attendance. On display was a Volvo FM540 prime mover with the ControlR[™] system fitted. The launch of the ControlR[™] system was part of H2 Future Mobility Day #8 event hosted by the Port Kembla Hydrogen Hub. Future Mobility Day events are held regularly to showcase zero emissions technology powered by hydrogen.



Image: Gastech CEO David Scrimshaw presenting at Future Mobility Day #8.

Reduced carbon emissions are now available for a range of diesel-powered equipment including heavy road vehicles and power gensets. "ControlR™ is more than just a technological advancement; it's a game changer for the heavy transport sector," said David Scrimshaw, CEO at Gastech Engine and Energy. "ControlR™ is where net zero meets commercial sense.



Image: Volvo FM540 Prime Mover with ControlR system installed on display at Future Mobility Day #8.

Illawarra Renewable Energy Zone reshaped away from offshore wind, to rooftop solar

23 May 2025

Illawarra renewable energy zone shifts away from large projects. | Illawarra Mercury | Wollongong, NSW

The NSW Government has unveiled a new "urban" direction for the Illawarra's Renewable Energy Zone (REZ) with offshore wind barely rating a mention. In Wollongong on Friday Environment Minister Penny Sharpe and Planning Minister Paul Scully talked up a new version of the Illawarra REZ that turns the focus away from large-scale generation projects, towards linked rooftop solar and community batteries. This was to focus on projects that can be delivered by 2030, especially solar, batteries and electric vehicles, Ms Sharpe said, while offshore wind was still "a fair way away".



Image: Environment Minister Penny Sharpe speaking during a visit to Green Gravity's lab in Port Kembla. Picture supplied

A round table event held by the ministers on Friday did not include any representatives of the offshore wind industry. The Illawarra REZ was declared in February 2023 with an aim for 1 gigawatt of electricity, with offshore wind and green hydrogen the big-ticket items for generating power and thousands of jobs. But a year later it did not have any projects in the pipeline - despite 17 gigawatts worth of generation coming from the expression of interest process. On Friday Ms Sharpe denied the Illawarra REZ had been reshaped because of the absence of major generation projects. "It isn't a reframing," she said. "It's really as we've been working on the declaration .. the work hadn't been done around really what is that going to look like. "This is different to the other REZs, the other areas [of NSW] ... they're really about generation and transmission, large scale. "This is about doing all of it. It's about doing the consumer piece first - we're really focused [on] 2030 as other technology

comes online. "We want the Illawarra Renewable Energy Zone to be leading in Australia about how do we make all these elements work together - rooftop solar, batteries, EVs, community batteries."

The ministers held a Roundtable event with Illawarra industry, business and community representatives on Friday to map out the next steps for the zone. The *Mercury* has confirmed there were no representatives of offshore wind developers at the roundtable. Ms Sharpe said the new REZ focus was on more immediate opportunities. "There has been a big conversation about offshore wind in this area, but ... let's be honest, it's a fair way away," she said. "So this is really about getting on with building out what we can, using the Illawarra as the place where we're going to showcase that, working with the other industries."

Household solar, battery focus

Instead of major generation projects, the new approach is likely to focus on integrating thousands of rooftop solar systems to generate electricity which can be stored in linked community batteries. Mr Scully said he had pushed the previous state government to include Illawarra in the REZ creation. "We're defining that as we go but what we want to do is harness where we've got good household solar use, good household batteries, a great deal of government property and community facilities and community batteries in an area that's ready to lead the charge," he said. "The Illawarra has all the components we need to test this out, to trial this, to get this ready to be rolled out to other parts of the state."

Contact

The **Port Kembla Hydrogen Hub** is funded by the <u>Illawarra Shoalhaven Joint Organisation</u> (ISJO) and NSW Government. For further information, please contact Jessica Young, Port Kembla Hydrogen Hub Facilitator by email: <u>info@portkemblahydrogenhub.com.au</u>. Previous editions of the **Port Kembla Hydrogen Hub Update** newsletter are available <u>here</u>.