

UPDATE #28

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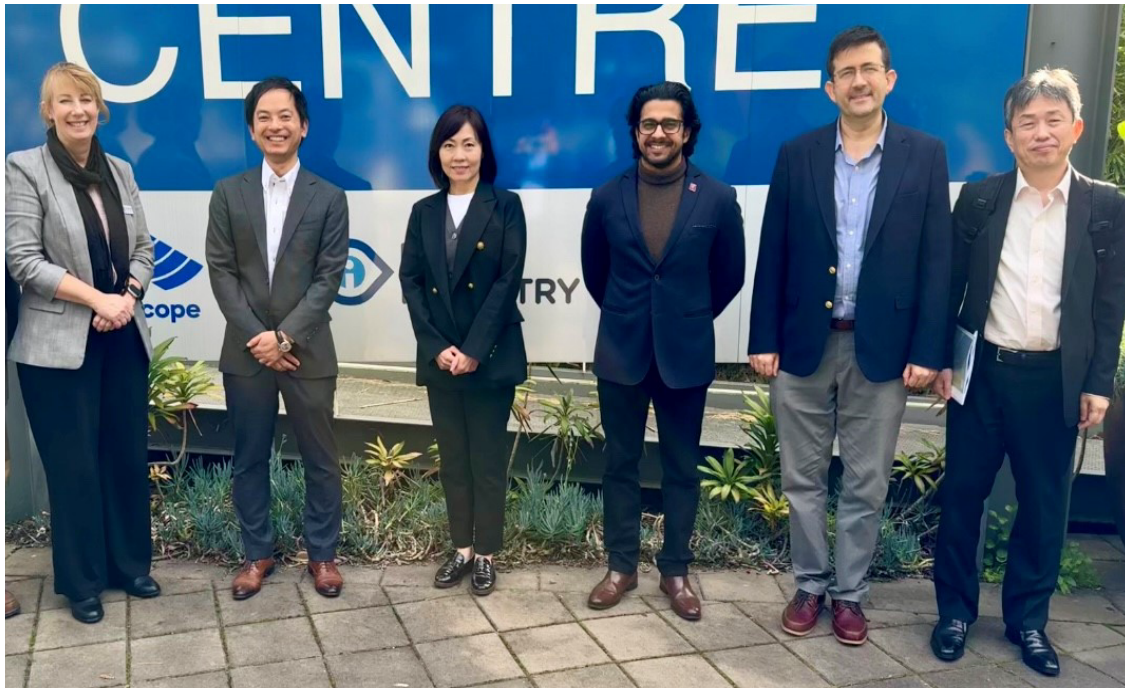
11 July 2024

Port Kembla greetings. This **Port Kembla Hydrogen Hub Update #28** contains information on the following key projects and initiatives:

- **International Delegations visit Port Kembla**
- **Hydrogen vehicle maker Hyzon confirms exit from Australian market** - 9 July 2024
- **H2 Future Mobility Day #6** - 27 June 2024
- **Illawarra wind zone 20km out to sea gets go-ahead** - 15 June 2024
- **The challenges facing BlueScope's grand plan to unlock industrial land** - 14 June 2024
- **Where did \$55.4m go? BlueScope's mill upgrade pushes ahead on its own steam** - 7 June 2024
- **BlueScope's \$300 million plate mill upgrade gets the go-ahead** - 7 June 2024
- **Illawarra set to learn where its share of \$75m in coal royalties will be spent** - 28 May 2024

Previous editions of the **Port Kembla Hydrogen Hub Update** newsletter are available [here](#).

International Delegations visit Port Kembla



Hitachi delegation at the BlueScope Visitor Centre

The past six months has seen a total of nine international delegations visit Port Kembla to learn more about the local hydrogen ecosystem. With over \$750 million of major energy projects being completed by the end of 2024, these delegations are exposed to the most developed hydrogen ecosystem in Australia.

Key points of interest are BlueScope’s decarbonisation plans, Sydney Water Treatment Plant that can provide recycled water for hydrogen production, the recently declared Illawarra Offshore Wind Zone, a potential source of renewable electricity and the Coregas H2Station - Australia’s first hydrogen refueller for heavy vehicles. Delegation members have been from Japan, Korea, Indonesia, Cambodia, Brunei, Laos, Philippines, Malaysia, Thailand and Vietnam.

Hydrogen vehicle maker Hyzon confirms exit from Australian market

7 July 2024

[Hydrogen vehicle maker Hyzon confirms exit from Australian market – pv magazine Australia \(pv-magazine-australia.com\)](https://www.pvmagazine-australia.com)

United States-based hydrogen fuel cell manufacturer Hyzon has announced it will halt its operations in Australia, citing challenging market conditions and waning government support. Hyzon, which focuses on deploying its fuel cell technology in heavy-duty commercial vehicles, has confirmed its decision to exit the Australian and Netherlands markets after a comprehensive strategy review amid ongoing losses.

The New York-based company cited waning support from Australian and European governments in the field of fuel cell-powered transportation and the disbandment of hydrogen subsidies across multiple European countries as key reasons for its decision. Despite the exit, Hyzon said it maintains an interest in returning to the Australian and European markets as a fuel cell system supplier to original equipment manufacturers (OEMs).



Image: Hyzon Motors

Hyzon Chief Executive Officer Parker Meeks said the decision was a “complex and difficult” one.

“Given the challenges of bringing new technology to market in an emerging industry, we believe we need to focus our efforts on the North American market,” he said.

The use of hydrogen as a fuel in heavy vehicles has been floated as a potential strategy to [decarbonise Australia’s transport industry](#) in pursuit of net-zero targets. In 2021 Hyzon established a purpose-built [assembly plant](#) in Victoria.

Hyzon had also announced pilot programs that would see its hydrogen fuel cells put to work in buses in Queensland, [tow trucks in Victoria](#), and trucks scheduled to service a [zinc refinery operation](#) in north Queensland. Hyzon expects to incur charges of about \$25 million (USD 17 million) in connection with planned exit activities, including employee-related costs, non-cash inventory write-downs and non-cash impairment charges.

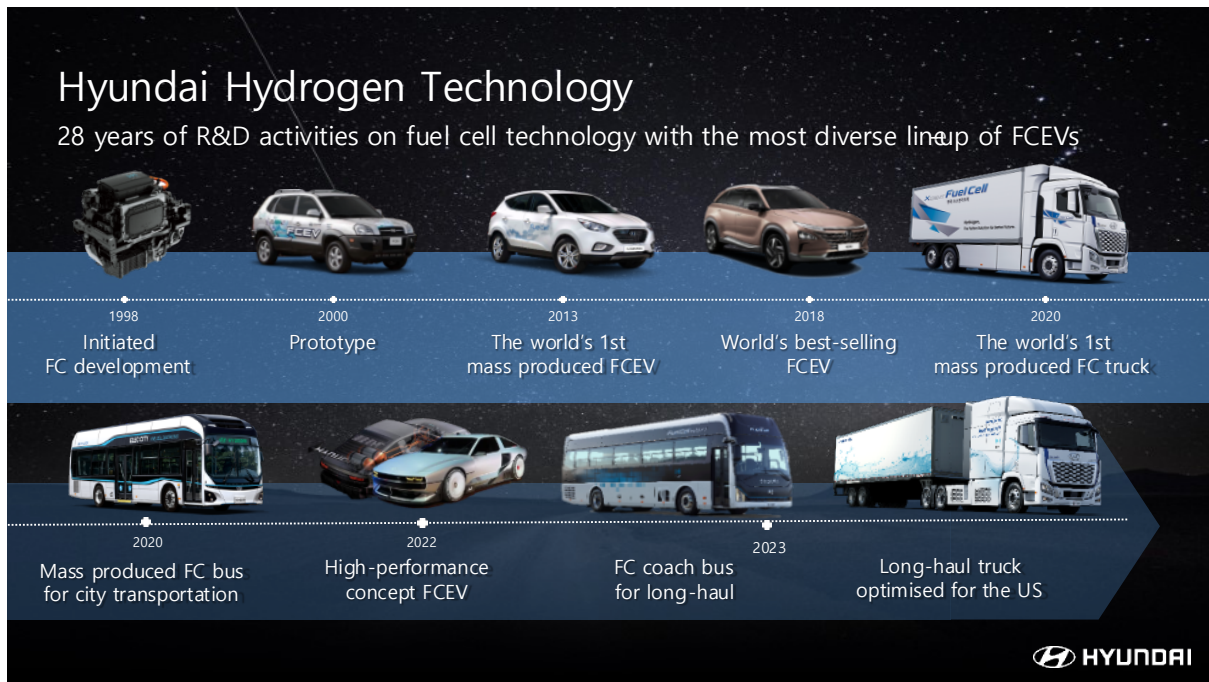
H2 Future Mobility Day #6

27 June 2024



Some 70 people from around Australia dialled into this Future Mobility Day event held on the 27 June 2024. With the Coregas H2Station refueller opening last July and two FCEV heavy vehicles operating in the region, Port Kembla is at the forefront of Australia’s heavy transport decarbonisation journey.

Scott Nargar from Hyundai gave an overview of Hyundai’s plans for FCEV heavy vehicles in Australia. For nearly 30 years Hyundai have been developing hydrogen fuel cell technology. We look forward to hosting their FCEV heavy rigid truck later this year at Port Kembla.



Stuart Pratt from Wasco gave an update on Australia's first diesel + hydrogen hybrid prime mover. Using [Hydra Energy](#) conversion technology from Canada, Wasco have converted a Freightliner prime mover and have completed initial testing and certification for the Australian market. This conversion pathway provides an opportunity to decarbonisation existing diesel powered heavy vehicles and we expect to see this vehicle in Port Kembla in the next few months.

Hydra's Proprietary Conversion Kit

Simple 2-day conversion to run hybrid of hydrogen & diesel

H₂ tanks & gas handling components behind or under cab 40 kg (1,000 km)

H₂ injection manifold in-line with air intake blends H₂ and air before entering engine block
NO engine modification

Dedicated controller and wiring harness behind the dashboard (ECU)
NO interception/modification of OEM ECU messages

[TAFE NSW](#) are supporting the decarbonisation of heavy vehicles with the release of their hydrogen microskill courses. Chris Greentree from TAFE NSW provided details on the courses they have developed to help industry build the skilled workforce they need to operate hydrogen powered vehicles and equipment. These courses have been developed using industry input from Coregas, ARCC, Foton Mobility and BOC.

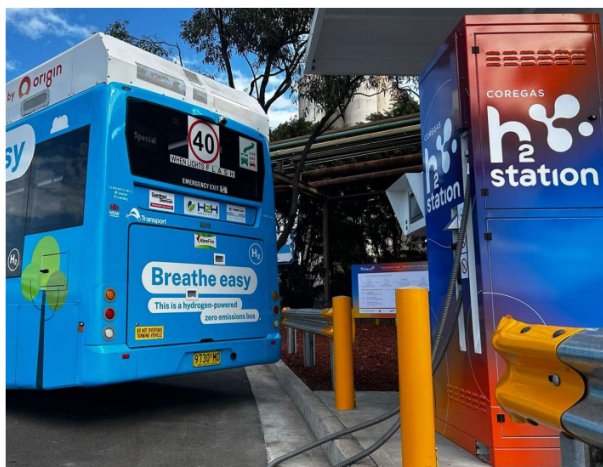
Refuelling fuel-cell electric vehicles

This course is tailored for individuals needing to refuel their FCEVs. It is designed for anyone operating a FCEV, exploring the best refuelling practices contributing to the safe and successful integration of hydrogen as a sustainable energy source.

Proudly developed in collaboration with ARCC and Haskel.

At the end of this course, learners will be able to:

- Identify the key components and safety features of a hydrogen refuelling stations and their functions.
- Identify the key steps involved in safely refuelling a hydrogen fuel cell electric vehicle.
- Describe the basic safety procedures for refuelling and emergency protocols.



Refuelling of a hydrogen fuel cell electric vehicle – store.training.tafensw.edu.au

Illawarra wind zone 20km out to sea gets go-ahead

15 June 2024

<https://www.illawarramercury.com.au/story/8663513/chris-bowen-to-declare-illawarra-offshore-wind-zone-on-saturday/>



Photo: The wind zone, likely to eventually house turbines similar to this, will be declared on June 15, 2024. Picture supplied

Climate Change and Energy Minister Chris Bowen will declare the Illawarra offshore wind zone on Saturday, June 15, 2024. The zone will be smaller than the draft zone, covering 1022 square kilometres, instead of the 1461 square kilometres of the draft zone, and will be located 20 kilometres offshore.

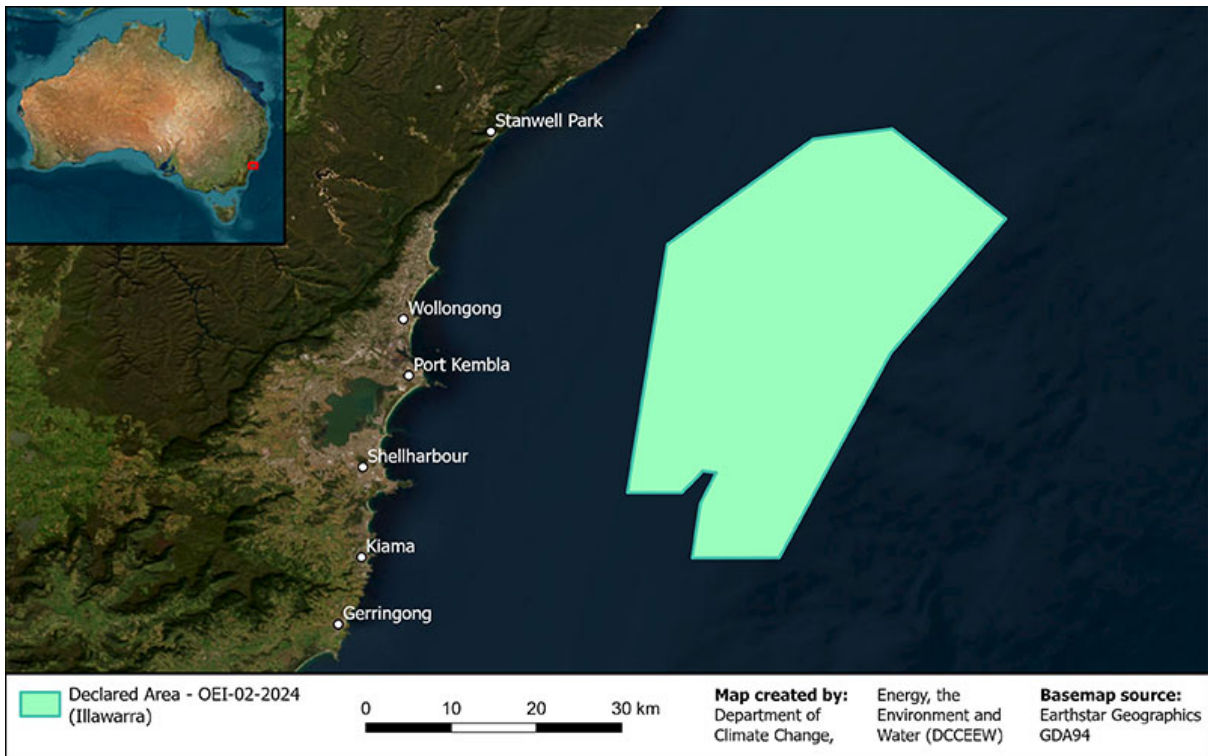


Photo: The final declaration zone. Picture supplied

In a statement, the Minister Bowen states the final zone will exclude significant environmental areas including the biologically important area for the Little Penguin, the Shelf Rocky Reef Key Ecological Feature and the Southern Right Whale migration and reproduction area. Minister Bowen states that the project will create an estimated 1740 jobs during construction and 870 ongoing jobs during operations. "Declaring this offshore wind zone brings the Illawarra a step closer to becoming a major provider of the building blocks of the net zero transformation - green power, green hydrogen and green steel - along with thousands of new jobs."

Alison Byrnes, MP for Cunningham said the final zone reflected suggestions made during the consultation period last year. "Amending the zone so that it commences 20 kilometres from the coast and excluding significant environmental areas is a sensible compromise that reflects the majority of community opinion while helping to achieve our shared goals of more renewable energy, more jobs and fewer emissions." Now that the zone is declared, Minister Bowen has the power to grant licences to prospective developers. These feasibility licences will enable developers to carry out the tests and studies required before any offshore wind turbines are located. "My expectation is that all proponents not only make sure that their projects meet the highest environmental standards but also incorporate local content, including the use of locally produced steel, and local workforce and develop a strong benefit sharing scheme so that our community meaningfully benefits from hosting an offshore wind farm should one be developed," Ms Byrnes said.

Applications for feasibility licences open on Monday, June 17, and will close on Thursday, August 17, 2024. President Responsible Future (Illawarra Chapter) Jenny Cullen said the group - which has campaigned against the offshore wind zone - was not surprised by the declaration. "The association highlights the Minister's disregard for the concerns expressed by thousands of community members, environmental organisations and local commercial fisheries and tourism operators," the group said in a statement.

In a statement, pro-wind farm group Good for the Gong welcomed the declaration. "We welcome the transition away from polluting fossil fuels and will now work to hold the Federal Government and any future project proponents to doing renewables right," Illawarra parent Nathan Ashguerra said. "Replacing fossil fuels with renewables done right is the most important step we can take to stop our oceans from disastrous warming due to climate change and protect marine life." The group called for rigorous environmental impact processes, minimum guarantees of local employment and content, co-design with traditional owners, and community benefits.

The zone is smaller than the declared Hunter offshore wind zone, which extends to 1854 square kilometres and would potentially produce a smaller amount of electricity, an estimated 2.9 gigawatts of electricity, enough to power 1.8 million homes.

The challenges facing BlueScope's grand plan to unlock industrial land

14 June 2024

<https://www.illawarramercury.com.au/story/8659496/revitalising-bluescope-lands-port-kemblas-future-up-for-debate/>

From the ground level, it's difficult to get a sense of just how vast the scale of the [masterplan for the BlueScope surplus lands](#) is. The former warehouses, loading bays, offices and green space that make up much of the 200 hectares set to be revitalised have been off limits to the public. "It's a site that's been deliberately not available to the public for many, many years, because it was an industrial production facility," Wollongong MP and Planning Minister Paul Scully said.

[Last Friday, Mr Scully announced](#) the formation of a cross-government working group as BlueScope and the government begin to tackle the mammoth task ahead and there's no time to waste, with BlueScope targeting the project to be well underway by its 100 year centenary in 2028.

The project is shaping up to be one of the most transformative initiatives the city has ever seen, on par with the establishment of the steelworks and port itself, and with competing visions about what the end result could look like, there is pressure on the leaders to not squander the opportunity. In a press release accompanying the announcement, the project is compared to reactivating the Sydney CBD from Circular Quay to Central Station.

Just to the west of the CBD, the harbour city underwent its own land transformation, as the former rail yards and docks at Darling Harbour and Pyrmont Bay went from being the heart of what was once a working port into an entertainment and retail precinct, capped off with the glass towers of Barangaroo.

That is precisely what [outgoing Wollongong Lord Mayor Gordon Bradbery](#) does not want to see in Port Kembla. Instead, he says the focus should be on 21st-century manufacturing, building on the area's industrial heritage. "It's been used for decades for heavy industry and we need to focus on making it part of our sovereign capacity to produce and sustain our steel industry and associated industries in Australia."



Photo: Politicians and BlueScope executives at the announcement of funding for a transport plan for the future site. Picture by Adam McLean

'Life-changing opportunity'

Around Australia, there are examples of old industrial sites being reactivated, some well, some not so well. The transformation of Docklands from pre-container port into apartment towers and corporate headquarters has its critics, while the re-use of Australia's old car manufacturing assembly lines have had varying levels of success.

The former Mitsubishi site in Tonsley, south of Adelaide, has been integrated with the neighbouring Flinders University and serviced by an extension of the rail line, while at the other end of the city in Elizabeth, the much larger former Holden factory has had its [stops and starts](#). But perhaps the most similar to Port Kembla is the former BHP steelworks in Newcastle.

Thankfully Port Kembla won't have to contend with the loss of thousands of jobs during the process, but more than two decades since the last workers walked off the Newcastle steel plant, the [re-use of the site remains contentious](#), partly due to disagreements between the state government and the Port of Newcastle about a container port there.

It is these kinds of disputes that Mr Scully's working group, which he will chair, is designed to prevent. In addition to state government representatives, Wollongong City Council and BlueScope will be represented, to ensure that the benefits of the project are maximised, Mr Scully said.

"About one per cent of gross state product comes out of this facility, we have the potential through the masterplan to double that, to create the opportunity for 30,000 people to be employed in that area," he said. "This is the sort of life-changing, region-changing, state-changing opportunity that we have before us."



Photo: Green Gravity is one of the first tenants of the surplus lands, and unveiled its test apparatus inside an old warehouse in July 2023. Picture by Adam McLean

Jobs bonanza or heavy industry powerhouse?

At the heart of the project is a tension between the lofty goals and the realities of modern manufacturing. In June, during the masterplan process, BlueScope executives revealed they were targeting having up to 30,000 people working on site.

The number has a certain resonance to it, being roughly equivalent to how many people worked at the steelworks during the heydays of the 1970s. But modern manufacturing is a very different beast to the labour-intensive practices of the past. Despite this, the 30,000 number has been picked up by politicians, including Mr Scully, when talking about the vision for the 200 hectare site.

For comparison, the Wollongong CBD employs about 25,000 people, across about 100 hectares. Fitting in a similar number of people, while retaining 60 per cent of the land as open space, and ensuring the site remains amenable to heavy industry will be a challenge. One of the [earliest tenants in the old warehouses set to be transformed is Green Gravity](#), which is designing a gravity battery to operate in former mine shafts. CEO Mark Swinnerton said the company was attracted to the large, open format space, close to the steelworks, port and road and rail links.

"We need to have the ability to manufacture fairly sizable equipment and components, we need to have the floor space to assemble steel frames and components and prepare them to be distributed to mine sites." While the company's "gravity lab" is located inside the old no. 1 works site, the company's office is on the Innovation Campus, at Fairy Meadow. Mr Swinnerton said future plans for the Port Kembla lands should maximise the site's natural advantages, rather than seeking to locate as many workers as possible on the site.

"To me it would be squandering the natural benefit of that site, to not try and maximise the heavy industry dimension, because once you lose it, you lose it and not many places have it." Cr Bradbery concurred. "It is too valuable to lose to interests that are not focused upon the future of Australia's ability to manufacture."



Photo: An artist's impression of the site in future, facing south west opposite the Port Kembla gas tanks. The remains of the no. 1 blast furnace can be seen in the upper right. Picture supplied.

The unexpected trump card

Whichever path the project goes down - jobs bonanza or heavy industry powerhouse - there will be challenges for both. Already, Wollongong has a shortage of housing, and links to new housing areas in south-west Sydney are constrained by an at-capacity road network, and limited public transport options. The assembly of wind tower components in Port Kembla had to be ruled out due to low bridges over the M1, and wind towers and other large industrial components are only expected to get bigger.

At the same time, the ageing rail infrastructure that connects the city's heavy industry to the rest of the country is increasingly vulnerable to extreme weather events. "We won't be able to accommodate all the workers required for that if it's the numbers that they're quoting, and plus take into consideration all the constraints that are now on a city that is very vulnerable to inundation, flooding, bushfires and so on." Replacing the bridges, or improving transport connections to Sydney would require significant state and federal investment. But Port Kembla could be the region's unexpected trump card, Cr Bradbery said. "The future of this city is greatly enhanced by the maximum benefits we can get out of that port, because it also gives us political and economic leverage for the success of this city."

With the NSW government now considering the fallout from the Port of Newcastle pushing for a container terminal to be built there before Port Kembla, the city would be wise to leverage the one-off nature of the project, Mr Swinnerton said. "Certainly the rail and road linkages definitely need reviewing if you are going to maximise the value of that site." As the push resumes for the government to reconsider the Maldon-Dombarton link, the future prospect of moving 30,000 people and associated goods and materials into and out of the port will require serious consideration.

Where did \$55.4m go? BlueScope's mill upgrade pushes ahead on its own steam

7 June 2024

<https://www.illawarramercury.com.au/story/8655717/why-bluescope-is-self-funding-upgrades-to-60-year-old-plate-mill/>



Photo: BlueScope executive Tania Archibald said the company remained committed to supplying steel for wind towers, just not making them in Port Kembla. Picture by Adam McLean

After announcing long-awaited upgrades to the [60-year-old plate mill](#), the BlueScope boss turned to assembled workers in their blue and yellow high-vis. "I know that this project has been in the pipeline for quite a number of years," chief executive of Australian Steel Products Tania Archibald acknowledged at the end of her speech at the Inside Industry Visitor Centre on Friday, June 7. And it has. Work on the project had been occurring in-house at BlueScope but in March 2022, the former federal government announced \$55.4 million for the Advanced Steel Manufacturing Precinct, which put the project on the national agenda. Then costed at \$217 million, the funding boost would enable the plate mill to be upgraded to produce the steel needed for wind turbines, armoured vehicles and patrol boats.

In collaboration with the University of Wollongong, the precinct would employ 200 people directly, while supporting 1000 workers in adjacent industries. The federal funding came from the former Coalition government's signature \$1.3 billion Modern Manufacturing Initiative, which was rolled out immediately prior to and during the 2022 election campaign. Upon coming to government, the newly elected Albanese government initiated a review of all projects that were awarded funding and found the projects were awarded on merit. At the same time, the project was making its way through the NSW planning process.

During the process, a number of changes were made to the project, including [removing sections of the project which would have enabled the construction of wind turbine towers](#), partly due to the low

height of bridges over the road network around Port Kembla. This meant the project no longer fell under the approval conditions of the Modern Manufacturing Initiative and the grant funding was not awarded. Instead, BlueScope made further changes, including increasing the size of the furnace. These changes, along with industry-wide increases in the cost of construction since 2022, meant the final project would cost \$300 million, significantly more than the initial \$217 million costing. "That is the reality with the construction environment today," Ms Archibald said.

Now that the project has been given the green light by the NSW government, the upgraded plate mill, once complete, will supply high-grade steel for construction, mining, infrastructure, transport and defence projects and has the technical capacity to produce 600,000 tonnes of steel a day. But, Ms Archibald said, the hope to manufacture wind tower components from Illawarra steel remains an a goal for the steelmaker, just perhaps [not in Port Kembla](#). "We ourselves are not intending to build a wind tower fabrication facility, but we are advocating strongly and very happy to work with partners," she said. "We want to be the supplier of the high-quality plate that eventually goes into the wind towers."

BlueScope's \$300 million plate mill upgrade gets the go-ahead

7 June 2024

<https://www.illawarramercury.com.au/story/8654621/government-approves-206m-bluescope-steel-mill-upgrade/>



The project will be the most comprehensive overhaul of the plate mill since it was commissioned in 1963. Picture by Sylvia Liber

The NSW government has given the green light to BlueScope's [\\$300 million overhaul of its plate mill](#), to produce steel products for construction, renewable and defence projects. The project will create 95 jobs during construction and add an additional 18 jobs during operations. Planning Minister and Wollongong MP Paul Scully gave the state-significant project the tick of approval, and said the

upgrade was one of the most significant since the 1960s. "This major project represents the most comprehensive upgrade of the Plate Mill since it was built in 1963," he said.

The project originally involved upgrades to allow BlueScope to manufacture wind tower pieces, however [this was scrapped last year](#) because of bridges over the M1 being too low for the giant parts. The project now involves installation of new plate mill processing equipment and infrastructure, upgrades to existing electrical infrastructure as well as other works.

This will see the plate mill step up from producing 430,000 tonnes per year to up to 600,000 tonnes per year. "Much of the original plant is still in use today including the original reheat furnaces, and six decades later, this upgrade is needed to modernise operations and increase efficiency," Mr Scully said. "The new furnace represents the best available technology which will keep steel plate production local and continue to provide enormous economic benefit to the Illawarra for the future."

While the project will no longer involve producing entire wind tower tubes, BlueScope chief executive Australian Steel Product Tania Archibald said the steel plates produced by the facility would still be in use in the renewables sector. "The modernisation of the Plate Mill is an important step in bolstering Australia's sovereign manufacturing capability, supporting critical industries like renewable energy, defence, and major infrastructure," she said.

Working group for masterplan delivery

Mr Scully also announced that the state government will establish a 'whole of government' working group to coordinate government decision-making as the masterplan for 200 hectares of surplus land. In April, the state government announced \$500,000 to plan changes to the road network to enable access to the precinct.

BlueScope has signed a Memorandum of Understanding with TAFE, as one of the potential future anchor tenants. Once complete, the land is expected to be the worksite of up to 30,000 people. "This confirms the strategic importance that the NSW Government places on this land transformation - not only for the Illawarra region but the whole of NSW," Mr Scully said.

Illawarra set to learn where its share of \$75m in coal royalties will be spent

28 May 2024

<https://www.illawarramercury.com.au/story/8642330/illawarras-future-mining-royalties-to-fund-job-transition/>

The Illawarra is a step closer in being able to find out how its share of millions of dollars in mining royalties earned to help the region transition to a post-coal future will be spent. The NSW government has released its proposed structure for the [Future Jobs and Investment Authority](#), which will replace the Royalties for Rejuvenation scheme established by the former Coalition government.

Under that scheme, at least \$25 million per year was set aside from mining royalties collected by the state government to support coal mining communities. Since its establishment in 2022, the fund has collected \$75 million but has not paid out to any project. The previous government restricted the scheme from making any payments until 2028 or until it reached \$250 million.



Photo: Natural resources minister Courtney Houssos at an Illawarra roundtable earlier this year to inform the Future Jobs & Investment Authority structure. Picture supplied

Minister for Natural Resources Courtney Houssos said Labor's proposed structure would provide the right framework of support. "I look forward to receiving feedback on our proposed model and then getting to work on establishing these authorities by the end of the year," Ms Houssos said. Under the proposed structure each coal mining region will have its own regional Future Jobs and Investment Authority. The chair of each regional authority will also sit on the Future Jobs and Investment Board. This board will be chaired by the Future Jobs and Investment Advocate, a statutory role - meaning it is created in law - that will provide advice to the minister and across government. There will also be an Office of Future Jobs and Investment, a unit within the Department of Primary Industries and Regional Development that will support the other parts of the structure.

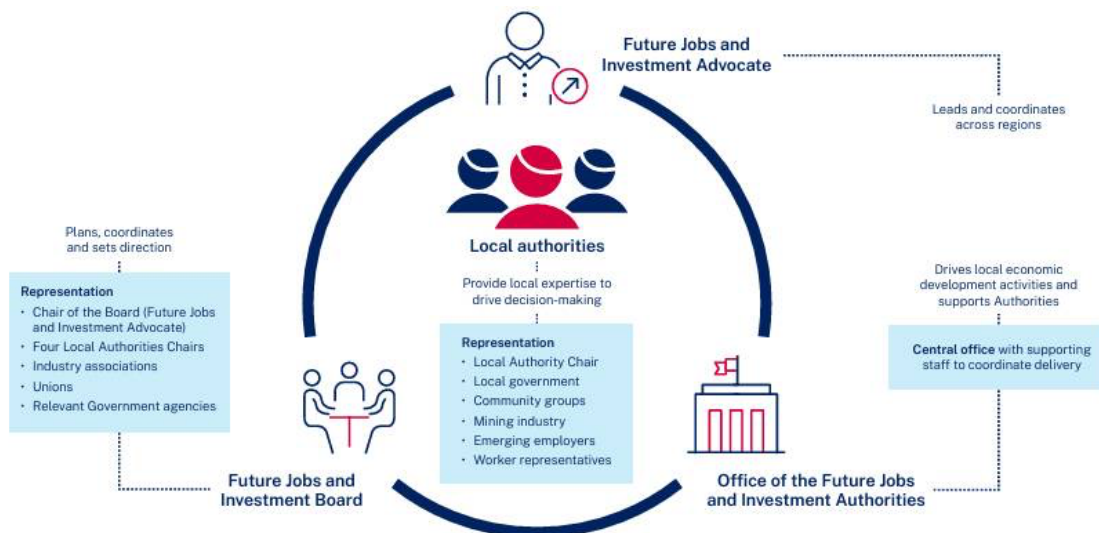


Image: The proposed structure of the Future Jobs and Investment program. Picture supplied

The NSW government will spend \$5.2 million over four years to establish the proposed structure.

"Releasing this issues paper continues the government's work with local communities for a future beyond coal," Ms Houssos said. While the Illawarra Expert Panel has had five meetings since February last year, what project might receive funding under the new structure remains an open question.

In the Hunter, a former open-cut coal mine will be turned into [a \\$95 million motorsport complex](#), but as most of the Illawarra's mines are underground, similar projects here may be off the cards. Minister for the Illawarra and South Coast Ryan Park said the new structure could support coal miners to transition into sectors such as manufacturing and defence. "Our highly skilled workforce has been making strides in transforming our region to be future ready, transitioning skills to modern industries necessary to continue attracting investments and new opportunities well into the future," he said. As of 2023, there were five active coal mines in the Illawarra, employing 3397 workers. Coal mining produces just over 10 per cent of the region's total economic output.

FURTHER INFORMATION

The Port Kembla Hydrogen Hub is facilitated by the [Illawarra Shoalhaven Joint Organisation](#) (ISJO) in partnership with the [Department of Primary Industries and Regional Development](#) (DPIRD). For further information about the [Port Kembla Hydrogen Hub](#), please visit the [webpage](#) or contact Nigel McKinnon, Deputy Director, Department of Primary Industries and Regional Development by email nigel.mckinnon@regional.nsw.gov.au.