

Submission
No 9

INQUIRY INTO DEVELOPMENT OF A HYDROGEN INDUSTRY IN NEW SOUTH WALES

Organisation: Protect Our Water Alliance

Date Received: 25 February 2021



Submission via link at <https://www.parliament.nsw.gov.au/committees/inquiries/Pages/inquiry-details.aspx?pk=2643#tab-submissions>

25 February 2021

Dear Mr Faraway and fellow State Development Committee Members,

SUBMISSION to the inquiry concerning the *Development of a hydrogen industry in New South Wales*

Protect Our Water Alliance (POWA) was formed in early 2019 in response to growing community awareness and anger, at ongoing damaging coal mining beneath Sydney's Water Catchment. Located on unceded Dharawal Country in Wollongong, POWA is affiliated with grassroots groups and environmental organisations across the Illawarra, Southern Highlands, and Greater Sydney regions. POWA advocates for greater protections for the Sydney Water Catchment, and calls for a ban on mining in it.

POWA welcomes this inquiry into the development of a hydrogen industry in NSW, and we thank Minister Kean for initiating it, and thank the committee for the opportunity to provide our brief submission.

POWA supports development of a GREEN (decarbonised) hydrogen industry in NSW but we do not support development of a BLUE/BROWN/GREY (fossil-fuel derived) hydrogen industry in NSW. We desire for our region and state and country to move away from reliance on fossil fuels for energy, and to embrace and make the most of Australia's abundant solar and wind potential for renewable energy. We support hydrogen production directly from renewable energy, aimed at 100% decarbonised energy supply systems very soon, and we support investment and policy development by the NSW government to make this large decarbonisation transition step. By contrast, we do not support hydrogen development if the hydrogen is produced from a merely less-polluting fossil-fuel, as one step in a series of small incremental purported *transitional* energy-system decarbonisation steps. (For example, some tout natural gas as a transitional fuel and argue for making hydrogen from natural gas because natural gas supposedly has 5-10 % lower greenhouse gas emissions than coal). We consider that our position supporting green hydrogen development only (complete decarbonisation), is consistent with the declining appetite of financial institutions

for climate risk (e.g. ANZ's recent announcement that it will stop lending to Newcastle Port¹) and in line with the global decarbonisation race that has begun in earnest over the past 18 months². We do not want our region or country left behind.

Given our purpose to protect the Sydney Water Catchment from (mostly coking-coal) mining-related damages, **POWA is very interested in the role that green hydrogen might play in replacing coking-coal in steel manufacture here at BlueScope steelworks in Port Kembla** (as well as elsewhere in Australia and overseas). We note that steel manufacture contributes about 7 % of global greenhouse gas emissions, and green steel manufactured using green hydrogen replacing coking coal as the reductant, is one approach to reducing steel manufacturing's massive emissions. Recent ABC news³ reported that Twiggy Forrest's Fortescue Metals company is backing green hydrogen as part of a green steel pilot plant in the Pilbara where he will trial making green steel using two methods (green hydrogen replacing coking coal as the reductant in blast furnaces, and an alternative molten electrolysis process) with an aim to have a commercial plant in the next few years. An availability of green hydrogen at Port Kembla would enable production of green steel (value-adding on Australia's natural iron ore and renewable energy potential endowments) at this NSW location as well.

Separate from green hydrogen's potential role as a non-carbon feedstock in industrial processes, we note the potential of green hydrogen (and possibly related green ammonia) for energy storage, useable in both the transport and electricity sectors. This has potential benefits in terms of related employment related to manufacturing and/or export, as well as fuel security for NSW (and Australia).

POWA asks that the NSW government develops policies that support decarbonisation transitioning by NSW manufacturing industries (e.g. BlueScope Steel) if they act early to replace fossil fuels with green hydrogen.

POWA also asks that the NSW government develops policies that ensures that NSW residents/businesses do not end up paying more for green hydrogen than others overseas, if NSW/Australia develops a green hydrogen export market.

POWA has only become aware of your inquiry very belatedly, and we are not experts on this topic though we are very interested in the potential for decarbonising and strengthening our local economy in the Illawarra. We are aware that the Illawarra Innovative Industry Network (i3net) applied to the Australian government's National Energy Resources Australia (NERA) for seed-funding support for a Port Kembla (Wollongong) based regional hydrogen technology cluster but missed out. NERA supported only one cluster in NSW and that was the Hunter Hydrogen Technology Cluster based in Newcastle⁴.

¹ Accessed from: <https://www.theguardian.com/australia-news/2021/feb/09/anz-to-stop-lending-to-australias-biggest-coal-port-over-its-exposure-to-fossil-fuels>

² Accessed from: <https://www.ft.com/content/a37d0ddf-8fb1-4b47-9fba-7ebde29fc510> The former head of the WTO, Pascal Lamy, describes an inflection taking place in the global shift from one energy system to another: "If you compare the world today to the world 18 months ago, the big difference is that . . . only 25 per cent of the world had a decarbonisation horizon. Today, 75 per cent of the world economy has a decarbonisation horizon. This is a major shift."

³ Accessed from: <https://www.abc.net.au/news/2021-01-22/boyer-lecture-andrew-twiggy-forrest-green-hydrogen-climate/13077070>

⁴ Accessed from: <https://www.nera.org.au/regional-hydrogen-technology-clusters>

POWA supports the submission that Wollongong City Council is making to your inquiry related to developing Port Kembla as a green hydrogen hub.

We also refer you to the following significant reports which discuss green hydrogen development in wider contexts and which we feel address many of your committee's terms of reference. Specifically both reports consider skills and employment aspects as well. Some or all of these articles' authors might be unaware of your inquiry and might not make their own comprehensive submissions, so we list the reports here just in case:

- Wood, T., Dundas, G., and Ha, J. (2020). *Start with steel*. Grattan Institute.⁵
- Beyond Zero Emissions (2020) *The Million Jobs Plan*.⁶

We also refer you to the following shorter documents/news:

- Baldwin, K. (2020) *ANU Energy Change Institute Submission on the Technology Investment Roadmap*⁷. This ANU submission identifies hydrogen as a priority technology, and makes an important point about how hydrogen production might link domestic electricity systems with export markets – pointing to a need for care in cross-sectoral planning.
- Smith, A.D. (2020) *Australian company H2X to manufacture hydrogen vehicles in NSW*. ABC News⁸. The company H2X is looking to produce 20,000 hybrid (hydrogen-electric) vehicles at Port Kembla by 2025.

Thank you for considering this submission.

Deidre Stuart
BScAppHons, PhD
Reply to:

⁵ Accessed from: <https://grattan.edu.au/wp-content/uploads/2020/05/2020-06-Start-with-steel.pdf>

⁶ Accessed from: <https://bze.org.au/wp-content/uploads/2020/11/BZE-The-Million-Jobs-Plan-Full-Report-2020.pdf>

⁷ Accessed from:

<https://energy.anu.edu.au/files/2020%2007%2001%20ANU%20Energy%20Change%20Institute%20Technology%20Investment%20Roadmap%20response.pdf>

⁸ Accessed from: <https://www.abc.net.au/news/2020-06-15/hydrogen-car-manufacturer-in-illawarra/12355138>