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NeuRizer- carbon neutral claims

1. We act for the Conservation Council of South Australia (**Conservation Council SA**), who is a movement of 90,000 passionate people from 60 member groups, who care about South Australia's natural environment.
2. We are writing on their behalf to ask that you investigate whether carbon neutral claims by NeuRizer are misleading or deceptive under the *Corporations Act 2001 (Cth)* (**Corporations Act**) and/or Australian Consumer Law (**ACL**). We are highlighting this given ASIC's Enforcement priorities for 2023 include misleading conduct in relation to sustainable finance including greenwashing and the ACCC 2023-2024 Compliance and Enforcement Priorities include: "Consumer, product safety, fair trading and competition concerns in relation to environmental claims and sustainability".

Summary of concerns

3. Our client is particularly concerned that NeuRizer provides misleading or deceptive representations on its website and in its Climate Related Financial Disclosure Report dated August 2022 (**NeuRizer TCFD Report**) about the company's carbon neutral status:
 - (i) "We are Australia's first carbon neutral producer of urea fertilizer- the building block of crop production around the world"¹
 - (ii) "To develop responsible, high quality agricultural nutrients to feed a hungry world that don't cost the earth"²
 - (iii) "NeuRizer is a certified carbon neutral organisation having been awarded Climate Active certification in March 2022 and is a signatory to the United Nations Global Compact. The NRUP is carbon neutral by design, and the decarbonisation pathway for the NRUP is

¹ <https://neurizer.com.au/>

² <https://neurizer.com.au/>

embedded in the Front-End Engineering and Design (FEED) process to ensure that the NRUP achieves zero carbon operations from first operations in 2025”³

- (iv) We are a Climate Active Certified Organisation who has embedded climate change and carbon neutrality into all aspects of the business.⁴
- (v) Certification by Climate Active is one of the most rigorous and credible carbon neutral certifications available. At NeuRizer we want to be at the forefront of sustainability and we feel this is the first step of many to strive for a smaller carbon footprint, with a mission to reduce our organisations impact on the climate, while we establish our position as Australia’s first carbon neutral domestic fertiliser producer to be certified for our business operations.⁵
- (vi) We recently became the only fertiliser project to be certified carbon neutral under the Australian Government’s Climate Active certification.⁶
- (vii) Our urea will have a lower emissions intensity when compared to traditional urea manufacturing processes and we are targeting zero CO2 emissions through carbon capture and storage.⁷ **(the representations)**.

4. These representations convey the imputation that the NeuRizer’s products are:

- (i) carbon neutral;
- (ii) produced in a way that reduces emissions;
- (iii) safe and environmentally responsible to produce; and
- (iv) that the technologies it relies on to become carbon neutral are rigorous and reliable.

5. The above representations are misleading for the following reasons:

- (i) The production of urea fertilizer at the NeuRizer site is not carbon neutral as it is based on fossil fuel hydrogen production from gases related to brown coal reserves;
- (ii) The carbon neutrality claim is based on certification as a climate active organisation, which relies on offsets of the company's office emissions footprint, rather than a reduction in emissions;

³ https://cdn-api.markitdigital.com/apiman-gateway/ASX/asx-research/1.0/file/2924-02551841-2A1390035?access_token=83ff96335c2d45a094df02a206a39ff4, p 4

⁴ https://cdn-api.markitdigital.com/apiman-gateway/ASX/asx-research/1.0/file/2924-02551841-2A1390035?access_token=83ff96335c2d45a094df02a206a39ff4, p 9

⁵ <https://neurizer.com.au/our-responsibility/climate-active/>

⁶ https://cdn-api.markitdigital.com/apiman-gateway/ASX/asx-research/1.0/file/2924-02551841-2A1390035?access_token=83ff96335c2d45a094df02a206a39ff4, p 4

⁷ https://cdn-api.markitdigital.com/apiman-gateway/ASX/asx-research/1.0/file/2924-02551841-2A1390035?access_token=83ff96335c2d45a094df02a206a39ff4, p 9

- (iii) In-situ gasification that is used for the urea production is not safe and environmentally responsible due to the environmental risks and heritage impacts associated with the process;
- (iv) While NeuRizer claim to use carbon dioxide produced by the in-situ coal gasification in their production, they will also rely on carbon capture and storage which is not yet a proven and cost effective technology for this process;
- (v) NeuRizer indicated in November 2020 it would not be carbon neutral until 2030⁸ but has “committed to producing a zero carbon product operation by 2025⁹”

Inferences from representations

6. The ACCC in its guide “Green marketing and the Australian Consumer Law” (2011) **(the Guide)** discussed the term “carbon neutral” and environmental claims more broadly. In particular, the Guide states that “unqualified statements are risky because they may not adequately explain the environmental benefits of your product to your target audience.”
7. The concept of carbon neutrality isn’t defined in the Guide but is generally considered to be a product “making or resulting in no net release of carbon dioxide into the atmosphere” and is often associated with offsetting.
8. The Guide also states:

“Increasingly, companies are making claims regarding the ‘carbon neutrality’ of their products and services. Any claims you make about carbon neutrality should be factually based and not overstated. You should also consider the entire life cycle of a product when making claims about carbon neutrality. Claiming that your product is carbon neutral if it only applies to the carbon produced in the manufacture of the product—and not its actual use and operation—may risk misleading consumers that the product is carbon neutral for its entire life cycle”.¹⁰
9. NeuRizer make a number of unqualified statements on their website about their impacts on the environment. As outlined in the representations, NeuRizer states they provide “responsible, high quality agricultural nutrients to feed a hungry world that don’t cost the earth”, “embed climate change and carbon neutrality” into their business and are at the “forefront of sustainability”. The NeuRizer’s website provides little detail to qualify the use of these broad statements. In fact, they are silent on the details of how their product is intended to be made at the proposed Leigh Creek site.
10. On the page about the Urea project it states:

⁸NeuRizer’s Climate Related Financial Disclosure Report <https://reneweconomy.com.au/leigh-creek-pushes-huge-2-6-billion-brown-coal-gasification-plant-for-fertiliser-86309/>, p 4

⁹ <https://neurizer.com.au/our-business/neurizer-urea-project/>

¹⁰ <https://www.accc.gov.au/system/files/Green%20marketing%20and%20the%20ACL.pdf> p 14

At NeuRizer, we're leading the world in the development of responsible inputs for food production. We are Australia's first carbon neutral producer of urea fertiliser – the building block of crop production around the world.

And unlike the majority of urea fertiliser currently used in Australia, ours is made right here in our backyard, meaning we're also slashing the carbon footprint linked to transport.

We're cleaning up one of the world's most carbon hungry industries, while strengthening the country's supply of critical agricultural nutrients.

Climate change, drought, severe weather and disease... the outlook for the coming century is bleak. Business needs to change. Growth shouldn't cost the earth and the futures of generations to come.

11. There is no information on the website about how the fertiliser will be produced. In fact the website sometimes infers that as “Australia’s first carbon neutral producer of urea fertiliser” production (rather than testing) is already occurring, which is not the case. The product will be produced from underground burning of coal to produce gas that is captured and used to produce the ammonia/fertiliser through blue hydrogen, once all the relevant approvals are granted. See **Annexure A** to understand the current status of NeuRizer’s environmental approvals in both South Australia and the Commonwealth. The process involves in-situ coal gasification, not mentioned on the website, which is banned in Queensland and Scotland because of the environmental risks involved in the process.¹¹
12. NeuRizer makes several similarly broad statements about the carbon neutrality of their products. The main page of the website states “We are Australia’s first carbon neutral producer of urea fertilizer”. This claim is misleading as the Climate Active certification is for NeuRizer’s organisation and not their product, although the fine print further into their website indicates that they intend in future to seek to become accredited as a “climate active product”. The lack of prominent disclaimers makes several of the headline claims about the product misleading or deceptive. Case law has found such conduct misleading where the disclaimers are not prominent.¹² A consumer or investor viewing the website would understand from their representations that the products produced by NeuRizer are carbon neutral, environmentally friendly and sustainable.

Misleading claim 1: The production of urea fertilizer at NeuRizer site is based on fossil fuel hydrogen production from gases related to brown coal reserves;

13. NeuRizer’s project involves developing “in-situ coal gasification” at Leigh Creek in South Australia at the site of an old Brown coal mine on the land of the Adnyamathanha people. It

¹¹ <https://statements.qld.gov.au/statements/82404>, <https://www.gov.scot/news/underground-coal-gasification-blocked/>

¹² *Singtel Optus Pty Ltd v ACCC* [2012] FCAFC 20;

aims to produce synthetic gas (syngas) from the remnant coal resources at the former Leigh Creek coalfield. A preliminary feasibility study for a fully integrated urea production facility with a project life of more than 30 years was completed in October 2020, and the South Australian Government awarded the petroleum production licence for the upstream operations in November 2020. The project received environmental approval for demonstration underground coal gasification in April 2018 and produced the first syngas in October 2018.

14. Stage 1 of the project involves the commercial development of the project through a small-scale power plant using syngas derived from the coal by 2023. A bigger power plant along with downstream processing facilities to produce “low carbon” urea would be added in stage 2, that is yet to be approved.¹³ The coal resource would be converted to syngas producing methane, hydrogen and other chemicals. The technology involves heating the coal seam at very high temperatures with air fed through inlet wells to allow oxidation. The solid coal will be converted to syngas when temperature exceeds 900°C. The project intends to use 41 gasifiers at Leigh Creek. The processed syngas will be sent to an onsite power station and downstream processing facilities to produce fertilizer materials such as ammonia and urea. The ammonia will be produced through refining syngas by combining the ammonia and the carbon dioxide produced from extraction of syngas. This is estimated to consume 730kg of CO₂ to produce a tonne of urea. The remaining 25% of CO₂ produced from the syngas will be captured and stored onsite, in the voids created during the coal gasification.
15. No where on the NeuRizer website does it discuss the details of how the fertilizer is produced. In the section about the project at <https://neurizer.com.au/our-business/neurizer-urea-project/>, it discusses delivering “low-cost, high quality nitrogen based fertilisers” then discusses the project being carbon neutral. The last line of the section talks about the fact that it is fully integrated urea production facility in Australia, with “all inputs (gas, power and CO₂) for low carbon urea production”. No where on the site does it discuss the fact that the gas used to produce the fertiliser is produced from the burning of a coal reserve. Coal is a non-renewable fossil fuel. The product gas produced from the gasification is a mixture of the products from all of the reactions and includes methane, hydrogen, carbon monoxide, carbon dioxide and various higher hydrocarbons.¹⁴ The process of turning the coal into gas and then burning the gas produces greenhouse gas emissions that contribute to the climate crisis. While underground coal gasification involves less emissions than traditional coal power, it still produces a significant amount of carbon dioxide and methane. To make the site “carbon neutral” it is necessary to rely on CCS technology and the capture of the carbon dioxide during the production process of the urea, although again how this will work is less than clear from the website. CCS is not a proven technology for this type of process. As outlined below there are significant risks associated with this approach.

¹³ <https://www.nsenenergybusiness.com/projects/leigh-creek-coal-gasification-project/>

¹⁴ <https://publications.csiro.au/rpr/download?pid=legacy:2099&dsid=DS1>, p 12.

Misleading claim 2: The carbon neutrality claim is based on certification as a Climate Active organisation which relies on offsets of the company’s offices rather than of its product;

16. Climate Active is a government trademark used to promote carbon neutral products and services. It has several different marks including a “carbon neutral organisation” mark. “Carbon neutral organisations” includes commitments a company makes to ensure its operations are carbon neutral, usually through their office set up. This is the most popular type of certification by Climate Active. This is confusing to consumers who would assume carbon neutrality applies to a company’s whole organisation including their products, and not just their office operations. The EDO in February 2023 lodged a complaint with the ACCC about the broader issues associated with the use of this mark.¹⁵
17. NeuRizer have set out in their Climate Active certification that they aim to look to become carbon neutral for their product. However their current certification is only for the organisation itself and includes emissions relating to accommodation and facilities, air transport, carbon neutral products, cleaning, construction services, electricity, food, land transport, office equipment, postage, products, professional energy, energy and waste. It does not include commitments at this stage to reduce its existing emissions from development of their products or purchase of renewable energy.¹⁶ The Climate Active certification is therefore based on offsetting all emissions through international carbon offset projects based on avoided emissions offsets: the Malawi Cookstove project, Guatemalan Deforestation and Indonesian Geothermal project to displace coal and oil in Java.¹⁷
18. The Climate Active trademarks for a carbon neutral organisation do not require a company to reduce its emissions, and in fact allow it to offset the emissions generated in its operations. The Climate Active website states that certification is based on making a “defensible claim of carbon neutrality by calculating your carbon account or footprint, reducing emissions where possible and offsetting any residual emissions”. Nor does Climate Active verify the offset programs used are working effectively. This issue was explored in a recent Four Corners program “Carbon colonialism”, where the investigation revealed logging of Climate Active offsets.¹⁸
19. One of the difficulties with the use of the term “Carbon neutral” is the lack of standards around carbon neutrality and what is consistent with the latest science from the Intergovernmental Panel on Climate Change (**IPCC**). Carbon neutral can cover a defined part of business operations and typically accounts for CO₂ emissions, but not other greenhouse gases. Methane is a potent greenhouse gas and not covered by a ‘carbon neutral’ claim which only addresses carbon

¹⁵ <https://australiainstitute.org.au/wp-content/uploads/2023/02/Australia-Institute-complaint-Climate-Active-WEB.pdf>

¹⁶ https://www.climateactive.org.au/sites/default/files/2022-03/Leigh%20Creek%20Energy%20Limited_Initial%20Cert_Year%201%20FY2021-22%20%28projected%29_PDS.pdf, p 8

¹⁷ https://www.climateactive.org.au/sites/default/files/2022-03/Leigh%20Creek%20Energy%20Limited_Initial%20Cert_Year%201%20FY2021-22%20%28projected%29_PDS.pdf, p 12-13

¹⁸ <https://www.abc.net.au/news/2023-02-13/carbon-colonialism/101968870>

dioxide. A carbon neutral claim is different from a net zero claim which refers to a company reducing all greenhouse gas emissions across its whole supply chain. The term “carbon neutral” is often confusing to investors who may think that it contributes to emissions reductions and may be interchangeable with net zero claims.

20. There are several recent scientific reports that discuss the use of offsets (particularly avoided emissions offsets) and suggest that they should not be used to base “net zero” claims and would therefore raise questions as to the basis of achieving carbon neutrality.¹⁹ For example, the Oxford Principles for Net Zero Aligned Carbon Offsetting²⁰ says that most offsets available today are emissions reductions, as used here, which are not sufficient to achieve net zero in the long term, and encourage instead decreasing emissions and minimising offsets. Where offsets are needed they should come from carbon removal²¹. Importantly the recent United Nations High Level Working Group stated that high integrity offsets could not be counted towards a company’s net zero plan, as deep reductions in emissions must be prioritised.²² The Science-Based Targets Initiative (**SBTI**) is a collaboration between the Carbon Disclosure Project, World Resources Institute, WWF and the United Nations Global Compact. The SBTi’s goal is to define and promote best practice in “science based” emissions reduction target setting. In relation to offsets SBTi states that:

*Offsets are only considered to be an option for companies wanting to finance additional emission reductions beyond their science based targets or net zero target.*²³

21. “Carbon neutral products” are in most cases not significantly reducing their emissions but merely paying for offsets for their scope 1 and scope 2 emissions. The IPCC has specifically said in the Sixth Assessment Report that there are significant risks around use of carbon offsets particularly under scenarios with increasing CO₂ emissions:

*While natural land and ocean carbon sinks are projected to take up, in absolute terms, a progressively larger amount of CO₂ under higher compared to lower CO₂ emissions scenarios, they become less effective, that is, the proportion of emissions taken up by land and ocean decrease with increasing cumulative CO₂ emissions. This is projected to result in a higher proportion of emitted CO₂ remaining in the atmosphere (high confidence).*²⁴

Misleading claim 3: In-situ gasification that would be used for the urea production is not safe and environmentally responsible due to the environmental risks and heritage impacts associated with it.

22. The NeuRizer website indicates that the technology being used is “sustainable” and carbon neutral. Several scientific studies note the risks associated with coal gasification processes.

¹⁹ https://www.un.org/sites/un2.un.org/files/high-level_expert_group_n7b.pdf

²⁰ <https://www.smithschool.ox.ac.uk/sites/default/files/2022-01/Oxford-Offsetting-Principles-2020.pdf>

²¹ <https://www.smithschool.ox.ac.uk/sites/default/files/2022-01/Oxford-Offsetting-Principles-2020.pdf>, p1

²² https://www.un.org/sites/un2.un.org/files/high-level_expert_group_n7b.pdf, p 19

²³ SBTi, Does SBTi accept all approaches to reducing emissions? <https://sciencebasedtargets.org/faqs#does-the-sbti-accept-all-approaches-to-reducing-emissions>

²⁴ IPCC, Sixth Assessment Report, *Climate Change 2021: The Physical Science*

Basis- https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_SPM.pdf, pg. 20-8.4.1

The process itself produces polluting gases such as carbon dioxide, carbon monoxide, hydrogen sulphide, hydrogen sulphide, nitrogen oxides, tar and ash.²⁵ Underground coal gasification can lead to carcinogenic waste contaminating groundwater, danger of underground explosion, gas emissions that may come to the surface and subsidence risks even after several years. There are associated risks with impacts on groundwater, surface water and subsidence, or the atmosphere around project sites.²⁶

23. For the above reasons, coal gasification, the process used by NeuRizer, has been banned in Queensland and Scotland because of the environmental risks involved in the process.²⁷ After trials of coal gasification in Queensland and assessment by scientists of the trials, the Government conclude that the potential impacts and risks associated with the commercial scale underground coal gasification projects outweighed the foreseeable benefits.²⁸
24. Queensland undertook a prosecution of the main test sites for underground coal gasification prior to it being banned. Linc Energy was prosecuted in the District Court for serious environmental damage at its well in Chinchilla. Judge Michael Shanahan handed down a \$4.5 million fine, the largest environmental penalty in Queensland history.²⁹ The Linc Energy site at Chinchilla is still undergoing clean-up of the pollution, with the Queensland Government providing around \$30 million towards the costs of the clean-up due to the liquidation of the company involved.³⁰ In 2010, the Queensland Government also shut down a coal gasification project at Kingaroy after groundwater contamination, after benzene a known carcinogen was found at the site and the chemical toluene.³¹ Consequently Cougar Energy was fined \$75,000 for releasing cancer causing chemicals into surrounding groundwater.³²
25. In Scotland, underground coal gasification was banned in 2016 after expert advice said it posed too many risks to climate and the environment.³³ Scientific experts engaged by the Scottish Government also found that carbon capture associated with the process would not be cost effective.
26. The use of ammonia, or urea-based fertiliser produced from nitrogen is itself also contradictory from a sustainability perspective. The Royal Society published a report on the impact of

²⁵ Skvarekova, Tomaskova, Wittenberger, Zelenak, "Analysis of Risk Factors for underground coal gasification", *Scienco* (2019) v.27, issue 4, pp 227-235 at <https://scienco.com/pdf/10.1515/mspe-2019-0036#:~:text=Actual%20gasification%20produces%20polluting%20gases,hydrogeological%20structure%20of%20the%20deposits.>

²⁶ C R Ward "Coal geology", *Encyclopedia of Physical Science and Technology*, 2003, p 45-77

²⁷ <https://statements.qld.gov.au/statements/82404>, <https://www.gov.scot/news/underground-coal-gasification-blocked/>

²⁸ <https://cabinet.qld.gov.au/documents/2016/Mar/UCGpol/Attachments/PolicyStatement.pdf>

²⁹ (insert reference)

³⁰ <https://www.brisbanetimes.com.au/national/queensland/taxpayers-fork-out-31-million-to-clean-up-toxic-coal-gasification-plant-20190614-p51xrb.html>

³¹ <https://www.couriermail.com.au/news/underground-coal-gasification-plant-near-kingaroy-shut-down-after-cancer-causing-chemical-found-in-bores/news-story/96a104e5e03d7e60a66061f146dd9c19>

³² <https://www.couriermail.com.au/news/queensland/cougar-energy-fined-75000-for-releasing-cancer-causing-chemical-into-groundwater-at-coal-seam-gas-trial-at-kingaroy/news-story/7b5bd2ec9979a5c284e2874a89f532d7>

³³ <https://www.theguardian.com/environment/2016/oct/06/scotland-bans-underground-coal-gasification-ugc>

ammonia emissions from agriculture on biodiversity.³⁴ It states that ammonia production negatively impacts on biodiversity, as the main source of nitrogen pollution which can cause significant changes in composition of plant species and damage grasslands, heathlands and forests.³⁵ In Australia, ammonia/nitrogen based fertilizers also causes major pollution issues with catchment runoff impacting coral reefs and posing a major threat to the Great Barrier Reef.³⁶

27. Further, the representations that the product is 'responsible' is misleading in terms of social responsibility and recognised significant Aboriginal cultural heritage issues surrounding the project. NeuRizer is aware that the traditional lands at Leigh Creek carry immense cultural significance to the Adnyamathanha people. The Leigh Creek area forms part of Adnyamathanha lore and the coal, which will be destroyed during the underground coal gasification process is highly significant to the Adnyamathanha people.

Misleading claim 4: While NeuRizer claim to use carbon dioxide produced by the in-situ coal gasification in their production, they will also rely on carbon capture and storage which it not yet a proven technology in this context

28. NeuRizer is using a combination of both Carbon Capture and Storage (CCS) of some of the carbon produced in the voids underground left from the gasification and Carbon Capture Use and Storage (CCUS) of the carbon in the fertiliser itself.
29. CCS projects elsewhere in Australia such as the Gorgon gas projects, have failed to deliver the promised rates of carbon capture and been underperforming by around 50%. The first CCS project associated with the gas project was delivered some 3 years late and has sequestered less than 1 MT of carbon per year instead of estimated 4MT.³⁷ The IPCC has confirmed that CCS involves risks in its recent reports, stating that "Implementation of CCS currently faces technological, economic, institutional, ecological-environmental and socio-cultural barriers. Currently, global rates of CCS deployment are far below those in modelled pathways limiting global warming to 1.5°C or 2°C."³⁸ The Investor Group on Climate Change (IGCC) has also stated that "The economic and technological challenges posed by CCUS are significant. Simply put, if CCUS cannot be commercialised and used at scale, gas demand may drop further as alternatives like green hydrogen and/or renewables with storage mature".³⁹ The International Energy Association (IEA) CCUS tracking report, states that in 2021, "only one commercial power plant equipped with CCUS...[remained]... in operation". Moreover, the IEA tracking report states that

³⁴ <https://royalsociety.org/~media/policy/projects/evidence-synthesis/Ammonia/Ammonia-report.pdf>,

³⁵ Ibid

³⁶ <http://reefcatchments.com.au/files/2013/12/Great-Barrier-Reef-Perspective.pdf>

³⁷ IEEFA, "If Chevron, Exxon and Shell can't get Gorgon's carbon capture and storage to work, who can?" <https://ieefa.org/articles/if-chevron-exxon-and-shell-cant-get-gorgons-carbon-capture-and-storage-work-who-can>

³⁸ IPCC, Sixth Working Group- Climate Change 2022-Mitigation of Climate Change, https://www.ipcc.ch/report/ar6/wg3/downloads/report/IPCC_AR6_WGIII_SPM.pdf, p 32, C4.6

³⁹ Investor Group on Climate Change, A changing climate for Australian Gas- a new 1.5°C scenario analysis of new Australian gas projects, p 2

“[b]ased on projects currently in early and advanced deployment, the potential capture capacity of all CCUS deployment in power is projected to reach 60 Mt CO₂ in 2030 – well short of the 430 Mt CO₂ per year in the Net Zero Emissions by 2025 Scenario.”⁴⁰

30. CCS itself results in emissions through incomplete CO₂ capture and the release of fugitive methane emissions.⁴¹ NeuRizer is planning to use the cavities created by the burning of coal to store the carbon dioxide, as well as the fertiliser product itself. In 2014, researchers analysing the use of such cavities highlighted a number of challenges with CCS.⁴² First the CO₂ may interact with substances in the cavity complicating storage. There is also uncertainty around long term storage of CO₂ and any leakages could impact on human health and the environment and could potentially create seismic activity.⁴³ The other challenge is that the volume of CO₂ stored is much smaller than the CO₂ produced and can only be stored after the gasification process has stopped.⁴⁴ NeuRizer’s project also involves different challenges as the depths in which the CO₂ would be stored are relatively shallow around 500m below ground level, raising questions about whether it can be contained permanently.
31. Recent research on “blue ammonia” production, that is ammonia/fertiliser produced with gas, suggests it is not a carbon neutral product. A report of the Royal Society, a self-governing Fellowship of many of the world’s most distinguished scientists drawn from all areas of science, engineering, and medicine, confirmed this in a recent report “Ammonia: zero carbon fertiliser, fuel and energy store”⁴⁵. It found:

*While up to 90% of carbon dioxide could be captured, the upstream greenhouse gas emissions associated with natural gas extraction, limit the life-cycle emission reductions for combined steam methane reforming and carbon capture and storage to 60 – 85%. This degree of carbon emission reduction is impressive but, for net-zero carbon hydrogen production, current projections suggest that this process can only be part of a transition to a zero-carbon solution.*⁴⁶

Misleading claim 5: NeuRizer indicated in November 2020 it would not be carbon neutral until 2030⁴⁷ but has committed to producing “net zero carbon product operations by 2025⁴⁸”

32. NeuRizer in its original project discussion and interviews indicated:

⁴⁰ <https://www.iea.org/reports/ccus-in-power>

⁴¹ (add reference)

⁴² S. Durucan et al., ‘TOPS: Technology Options for Coupled Underground Coal Gasification and CO₂ Capture and Storage’, Energy Procedia, vol. 63, 2014, p. 5828.

⁴³ M. D. Zoback and S. M. Gorelick, ‘Earthquake triggering and largescale geologic storage of carbon dioxide’, PNAS, vol. 109, no. 26, 2012.

⁴⁴ S. Durucan et al., ‘TOPS: Technology Options for Coupled Underground Coal Gasification and CO₂ Capture and Storage’, Energy Procedia, vol. 63, 2014, p. 5828.

⁴⁵ <https://royalsociety.org/-/media/policy/projects/green-ammonia/green-ammonia-policy-briefing.pdf>

⁴⁶ Ibid, pg 14

⁴⁷ NeuRizer’s Climate Related Financial Disclosure Report <https://reneweconomy.com.au/leigh-creek-pushes-huge-2-6-billion-brown-coal-gasification-plant-for-fertiliser-86309/>, pg 4

⁴⁸ <https://neurizer.com.au/our-business/neurizer-urea-project/>

The company says it will also explore the potential of producing hydrogen gas, as well as the on-site storage of carbon dioxide produced from the processing of syngas. But it does not expect the project to be “carbon neutral” until 2030 at the earliest and is not clear about how that might be achieved”.

33. In September 2019, our client attended an industry briefing on the project where a question was asked from the audience suggesting “the problem with the project is what to do with the CO2”. NeuRizer’s response was summarised by our client as follows:

- We (NeuRizer) looked at sequestration, but it was ‘not possible technically or cost wise’
- If we go down the ammonia route we will be using about ½ the CO2 back into the production process
- Either way it will be a net CO2 producer
- We will be looking to bring in alternative ways of reducing CO2 ‘during the life of the project’ (not at the beginning)

34. The new website after NeuRizer created in March 2022, significantly changed NeuRizer’s approach and suggests that the company will be carbon neutral by 2025. Their Climate Active certification admits:

At this point of the organisation’s journey, it is impractical to set emissions reductions targets for the whole organisation as emissions are expected to increase until the LCUP is operational. However, once fully operational, the site is expected to operate with net zero emissions by implementing the aforementioned decarbonisation pathway elements. Once FID has been reached, the appropriate plans will be devised to achieve this outcome. FID is expected to be made in FY2023.

35. It is unclear whether NeuRizer has a reasonable basis to conclude that its operation can be carbon neutral or has undertaken a trial to prove it can be done. There are significant risks that not all carbon dioxide will be captured during the processing of the gases and there will still be leakage from the site as indicated in the research of Royal Society. Similarly, the CCS and CCUS processes involves significant risks as to whether that amount of carbon can be viably and economically stored on site.

Law on Misleading and deceptive conduct

36. Section 1041H of the Corporations Act is relevant to this conduct and states:

(1) A person must not, in this jurisdiction, engage in conduct, in relation to a financial product or a financial service, that is misleading or deceptive or is likely to mislead or deceive

37. Section 18 of the *Australian Consumer Law* similarly states:

A person must not, in trade or commerce, engage in conduct that is misleading or deceptive or is likely to mislead or deceive.

38. The representations are likely to also raise concerns about potential breaches of s29 and 33 of the ACL, when the product is sold.

Trade or Commerce

39. The website and the representations made in it are in trade or commerce and also promote a financial product, the shares of the company. The website targets future consumers and is designed to promote both the product and investment in NeuRizer as a leading fertiliser company providing an Australian product. The website also has the dual function of targeting investors in a listed company, as production has not yet commenced (despite the inferences to the contrary). For this reason the complaint is provided to ASIC for their consideration and the ACCC for its information in relation to future consumers of the product.

Harm associated with the conduct

Capital raising

40. NeuRizer is in the process of seeking capital for its project.⁴⁹ It is therefore crucial that the misleading representations are corrected, as investors may be otherwise harmed by investing in a product that is not “sustainable” or in fact “carbon neutral”. There has been significant media coverage of NeuRizer’s carbon claims including the following articles in local media:

- a. April 2022 <https://indaily.com.au/news/business/2022/04/04/briefcase-business-snippets-from-around-sa-34/> (“The ‘Neu’ relates to a new way of processing urea – one which has a net-zero carbon footprint,” it said in the statement)
- b. Sept 2022 <https://indaily.com.au/news/business/2022/09/06/new-plan-on-track-for-disused-sa-rail-line/> (“This is an important step on the path to production of urea at Leigh Creek as it will enable cost effective, efficient transport of our carbon neutral urea fertiliser to both the export and domestic markets,” NeuRizer managing director Phil Staveley said)
- c. Sept 2022 <https://indaily.com.au/news/business/2022/09/29/sas-top-companies-weather-covid-storm-with-confidence/> (Our Rising Star Award winner NeuRizer, formerly known as Leigh Creek Energy, is working on a urea project in SA. It plans to be the world’s first carbon-neutral urea production facility targeting domestic markets and exports with high-quality nitrogen-based fertiliser for the agriculture sector.

41. NeuRizer relies on offsets and technology like CCS/CCUS to achieve its stated goals. There are significant environmental risks associated with the project, none of which are disclosed. In Queensland in-situ gasification or underground coal caused significant environmental impacts and as a result of impacts around Chinchilla was banned.⁵⁰ As described above, Linc Energy

⁴⁹ <https://smallcaps.com.au/leigh-creek-energy-raises-cash-urea-project-lead-up-final-investment-decision/>

⁵⁰ <https://www.abc.net.au/news/2018-04-09/court-linc-energy-guilty-serious-environmental-harm-ucg-plant/9632964>, https://environment.des.qld.gov.au/_data/assets/pdf_file/0026/86723/pb-04-2018.pdf

was also fined \$4.5 million to the significant contamination to groundwater affecting nearby farmers who also used the water. The fine was significant also because Linc had attempted to hide the extent of contamination from the regulator.⁵¹

42. The project and the timeline for its progression can be found at **Annexure A**. As you will appreciate, NeuRizer still have significant approvals to progress in order to commence production of the fertiliser.

Impact on competitors:

43. There are other fertilisers, available in Australia, that are seeking to address their climate impact. Instead of using in-situ gas or other such technologies they are instead looking at renewable energy producing green hydrogen/ammonia products. For example, Yara fertilisers are looking at producing products using green hydrogen in Norway by 2023.⁵² The products proposed by NeuRizer will compete with these products that are produced by renewable means.
44. If you have any further queries please do not hesitate to contact me by email on kirsty.ruddock@edo.org.au or by phone at (02) 2 7229 0031.

Yours faithfully

Environmental Defenders Office



Kirsty Ruddock
Managing Lawyer
Safe Climate (Corporate and Commercial)



Anita O'Hart
Solicitor
Safe Climate (Human Rights and Coal)

⁵¹ https://environment.des.qld.gov.au/__data/assets/pdf_file/0026/86723/pb-04-2018.pdf

⁵² <https://www.yara.com/crop-nutrition/products-and-solutions/green-fertilizers/what-you-need-to-know-about-green-fertilizers/>

Annexure A

Timeline of actions

Petroleum and Geothermal Energy Act 2000

Assessment only considered Stage 1 of Leigh Creek Energy's proposed 3 stage Project.

Stage 1: Licencing

Action/ document	Date
NeuRizer applied for a petroleum production licence (PPL 269) for commercial scale in-situ-gasification of the coal resources at Leigh Creek	10 June 2020
DEM referred the proposal to the Independent Expert Scientific Committee (IESC) on Coal Seam Gas and Large Coal Mining	23 July 2021
DEM received advice from the IESC	15 September 2021
Community feedback session	20 January 2021
Community feedback session no.2	3 February 2021

Stage 2: Environmental Assessment and Approval of Environmental Objectives

Action/ document	Date
Received Leigh Creek Energy's (LCE) Environmental Impact Report (EIR) for LCE's Stage 1 Commercial Development	6 May 2021
Received Leigh Creek Energy's (LCE) Statement of Environmental Objectives (SEO) for LCE's Stage 1 Commercial Development	6 May 2021

Stage 3: Activity Notification and Approval

Not yet progressed.

Planning Development & Infrastructure Act 2016

Assessment includes approvals for activities such as Ammonia and Urea production.

Action	Date
Declaration of proposal as impact assessed development (pursuant to s 108 of the Act)	29 September 2022
Assessment report by Minister	Pending
Release of assessment document by proponent for public comment	Pending
Release of assessment requirements for an EIS by the State Planning Commission	Pending

Environment Protection Biodiversity Conservation Act 1999

Assessment only considered Stage 1 of Leigh Creek Energy's proposed 3 stage Project.

EPBC 2021/8953

Action	Date
Referral sent by Proponent (Leigh Creek Operations Pty Ltd) to Department	1 June 2021
Department received EDO's public submission	15 June 2021
Public submissions closed	16 June 2021
Comments received from DES relevant to deciding the appropriate assessment approach (bilateral assessment recommended)	16 June 2021
Late submission received from Geoscience Australia	18 June 2021
Timeframe suspended to seek further information from Proponent	23 June 2021
Proponent provided a response to the Department's further information request. (revised statutory timeframe now 18 August 2021)	28 July 2021
Referral Decision Brief	25 August 2021
Decision in Assessment Approach (preliminary documentation)	25 August 2021
Notification of Proposal Withdrawn	15 December 2021