

NSW EPA Draft Climate Change Policy and Draft Action Plan 2022-2025

Graymont Submission

Thank you for the opportunity to provide feedback on the NSW Environment Protection Authority (EPA) draft Climate Change Policy and draft Climate Change Action Plan 2022-2025.

Graymont supports the climate change objectives of the NSW EPA, including achieving net-zero greenhouse gas emissions by the year 2050, and appreciates this opportunity to provide information that we trust will assist the EPA as it finalises the above policy and action plan in line with its decision-making principles.

The following information provides an overview of Graymont globally, our NSW operations, our commitment to decarbonisation, and four key aspects of the lime industry:

- Essential
- Trade Exposed
- Hard to abate
- Re-carbonation

Introduction and Context

Graymont supports the Paris Agreement and is committed to actively participating in the realisation of its goal to limit global warming to well below 2, preferably to 1.5 degrees Celsius, compared to pre-industrial levels. We are working to further reduce our Company's carbon footprint, with the aim of achieving net-zero greenhouse gas emissions by the year 2050.

Graymont is a global leader in lime and limestone solutions that are required to produce many of Australia's essential products and services. As a local producer of lime and limestone in Australia, Graymont is committed to partnering with government and industry to address the unique decarbonisation challenge faced by the lime industry, which is at risk of carbon leakage (EITE) and is also 'hard-to-abate' due to the inherent chemical reaction required to produce this essential product.

Graymont welcomes further face-to-face consultation with the NSW Environment Protection Authority prior to it finalising the draft policy and action plan to discuss this submission in further detail.

Lime is an Essential Product in Australia

As an industry leader in the global lime industry, in business for over 70 years, Graymont has the privilege of supplying products and solutions that are essential to healthy, modern societies and crucial to a decarbonised economy.

Among a myriad of vital applications, lime is used in the production of clean drinking water; the treatment of wastewater; in agriculture; for scrubbing air emissions from incinerators, power plants and industrial plants; in the stabilization of soils for the construction of roads and infrastructure; in the manufacture of

steel, paper, and glass; and in the production of critical minerals and materials necessary for a decarbonised world.

During the recent COVID-19 pandemic, lime was recognised as an essential product in the various jurisdictions in which we operate. Under the strictest of lockdowns and border controls, Governments at all levels, including in Australia and New Zealand, granted exemptions to the lime industry to ensure no disruption to the supply of lime as it is a critical input to the supply chains and operations of many essential products and services.

Lime is also part of the solution of reducing greenhouse gas emissions as it re-carbonises in certain applications, hence removing carbon dioxide from the atmosphere.

Graymont's customers directly benefit from the availability of lime and limestone solutions that will help them meet their own climate-action targets.

Graymont's Australian Operations

Graymont operates 14 facilities across Australia, comprising lime plants and limestone quarries. Located predominantly along the east coast of Australia in New South Wales, Queensland, Victoria, South Australia and Tasmania, Graymont employs approximately 275 people nation-wide, the majority of whom live within the regional communities where we operate.

The above operations have been servicing the Australian market for many years and were acquired by Graymont in August 2019.

Graymont's NSW Operations

Graymont operates five facilities within NSW that are regulated by Environment Protection Licenses:

- Galong limestone quarry and lime processing plant (EPL 4660)
- Attunga limestone quarry and lime processing plant (EPL 905)
- Sulcor limestone quarry (EPL 11225)
- Charbon lime processing plant (EPL 5412)
- Excelsior limestone quarry (EPL 953)

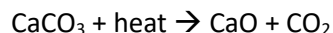
The above operations employ people directly from the local communities in which they operate and deliver solutions for a wide range of society's needs, including playing an important role in improving environmental outcomes in NSW.

Everyday environmental applications of the lime that comes directly from our NSW operations include the de-sulphurisation of stack emissions from industrial facilities, the treatment of wastewater, the production of clean drinking water, and a critical input to site remediation projects such as addressing acid mine drainage and the clean-up of heavy metals present in contaminated soils.

Lime decarbonisation faces a unique challenge (hard-to-abate)

The lime production process is peculiar in the fact that approximately two thirds of the emissions are from the unavoidable chemical reaction (process emissions). Lime is produced by heating limestone to

high temperatures, releasing CO₂ during the heating process, thereby producing lime. The calcination reaction is represented below, and the release of CO₂ is an inalienable fact of lime production.



The remaining approximately one-third of the emissions from producing lime arise from the use of fossil fuels, typically natural gas or coal, to generate the high temperatures (>1000 °C) necessary for calcination (combustion emissions). Although biomass is technically feasible, the challenges of cost, security of supply and consistency of quality limit its practical use for most lime production facilities.

These decarbonisation challenges inherent in the production of lime are often referred to as “hard-to-abate”, requiring special consideration.

Partnering with Government to address hard-to-abate process emissions

Graymont has succeeded in recent years in improving our fuel efficiency and steadily reducing our combustion-related emissions intensity. 2021 marked the fifth year in a row that Graymont achieved reductions in our emissions intensity, and our combustion-only emissions intensity continued its gradual decline to reach an all-time low in 2021, close to 23% below our baseline level of 2004. Process emissions are more challenging to address. To markedly reduce process emissions in the industry, lime producers will need to deploy step-change technologies on a commercial scale.

Graymont has been closely following developments in new technologies and believes that the most promising technologies involve carbon capture and usage or sequestration (CCUS). Given the magnitude of the capital investment required to accelerate the commercialisation and deployment of CCUS technologies on a large scale, the lime industry will need to work with various levels of government and other stakeholders to facilitate their implementation. Government policies and programs should promote and develop carbon transportation and sequestration infrastructure that is open to all. In addition, financial incentive programs will be needed to accelerate the development of these technologies.

In return, Graymont and the lime industry can both decarbonize and continue to provide societal benefits as providers of environmental solutions and facilitators of economic growth in Australia and the local regions within which we operate.

Lime is highly at risk of carbon leakage (trade exposed)

In addition to being hard-to-abate, lime is also highly trade exposed. Studies in North America and Europe have identified lime as one of the most trade exposed products. As a result, all jurisdictions with carbon pricing¹ provide support for local lime production so decarbonisation is incentivised, the industry can remain competitive with imported product and a local supply of this essential product is maintained.

- In Europe, it is deemed to be exposed to a significant risk of carbon leakage with free allocation of carbon units to be continued until 2030.

¹ Such as New Zealand ETS, European ETS, Canada Output Based Pricing Scheme, etc.

- In Canada, as part of their objective for establishing a federal Output-Based Pricing System (OBPS) to provide a price signal that incentivises reductions while minimising competitiveness and carbon leakage risks for EITE industries, the Government of Canada revised the baseline for output-based standards from 70 to 80 per cent for all sectors. In some cases, further adjustments of sectoral standards have been made for sectors that are assessed to be at relatively higher risk. Lime is one of the four sectors assessed to be at a very high risk and the standard has therefore moved to 95%
- In Alberta, an assessment of trade-exposure by Canada's Ecofiscal Commission and Navilus Research found lime to be the most trade-exposed industry.

The lime market is highly competitive globally, and the Australian lime market is no different to this, with offshore producers from New Zealand, Thailand, Vietnam, Malaysia and other countries competing for domestic and foreign customers of lime.

Any climate change policies that increase the cost of production of lime in Australia that are not also imposed on offshore competitors puts an additional pressure on domestic manufacturing plants and favours foreign suppliers that may not be subject to the same environmental standards. This results in so-called 'carbon leakage'.

When domestic demand is fulfilled by offshore suppliers due to a higher domestic production cost, the economic, as well as environmental, benefits are lost, with no reduction in global emissions.

It is crucial that the NSW EPA's Climate Change Policy and Climate Change Action Plan is designed in such a way that it maintains domestic businesses and avoids 'carbon leakage' while at the same time directing domestic businesses towards emission reductions.

Lime has the ability to re-carbonate

Lime captures ambient CO_2 as it reverts to limestone, a natural process known as carbonation (or mineralisation by carbonation). The extent to which this happens in practice depends on how lime is used.²

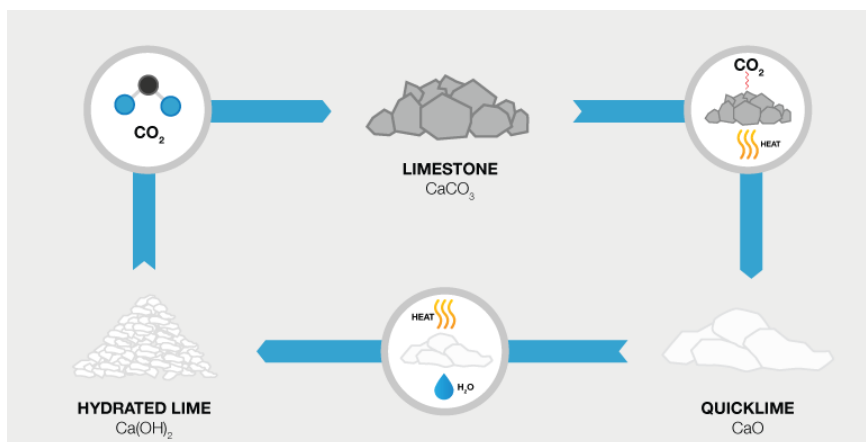


Image: The natural lime cycle

² European Lime Association (EuLA), 'Lime as a Natural Carbon Sink'; www.euLa.eu

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Graymont supports the objectives of the Climate Change Policy and Climate Change Action Plan 2022-25, including achieving net-zero greenhouse gas emissions by the year 2050. We look forward to continuing to work with the NSW EPA as we actively participate in the realisation of those objectives.

We refer to the decision-making principles and how they are guiding the NSW EPA's regulatory response to climate change. In line with the 'informed and evidence-based' principle, Graymont requests that the NSW EPA incorporates the information in this submission when finalising its climate change regulation.

The NSW EPA's Climate Change Policy and Climate Change Action Plan 2022-25 should take a tailored approach for each industry sector by taking into account the different challenges inherent in each sector in terms of their ability to reduce emissions and the timing of availability of technology such as CCUS that will help fast-track emissions abatement.

In summary, the unique characteristics of the lime sector that should be considered by the NSW EPA include:

Essential

Lime is a critical input for many of Australia's essential products and services

- *Eg, clean drinking water, wastewater treatment, agriculture, construction, paper, glass, steel, road stabilisation and environmental remediation*

Trade Exposed

The lime industry is emissions intensive trade exposed and at risk of carbon leakage

Hard to abate

60-70% of the emissions from the lime industry are process emissions from the inherent chemical reaction required to produce lime

Re-carbonation

Due to the nature of lime, there is natural re-carbonation of the mineral in certain applications²

Graymont welcomes ongoing consultation with the NSW Environment Protection Authority as it finalises the draft policy and action plan.

About Graymont

Graymont is a global leader in lime and limestone solutions. Headquartered in Canada, Graymont serves markets throughout North America and Asia Pacific. Graymont is also the strategic partner of Grupo Calidra, the largest lime producer in Latin America. Professionally managed and family owned, the company has been in operation for over 70 years.

Website: <https://www.graymont.com/en>

For further information please contact:

Anika McManus

Director Corporate Affairs, Environment and Sustainability – Asia Pacific

Graymont

anika.mcmanus@graymont.com

M +61 404 044 698