

TO : Clean Energy Regulator  
DATE : 28 January 2025  
SUBJECT : Newmont Boddington Gold – Explanation for Carbon Abatement during the 2023-24FY

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Clean Energy Regulator  
NGER and Safeguard Branch  
GPO Box 621  
Canberra ACT 2601

Facility: Newmont Boddington Gold  
Responsible Emitter: Newmont Boddington Pty Ltd (Executive Officer - Stephen Cole)  
Financial Year: 2023-24

## 1. INTRODUCTION

- 1.1 This document provides a formal explanation from the Responsible Emitter for the Facility regarding the level of carbon abatement undertaken during the specified monitoring period (FY23-24). The explanation addresses limitations in available technologies, barriers to implementation and future opportunities.
- 1.2 As Australia's largest gold mine, the Facility plays a crucial role in the economy by supporting local jobs, stronger communities and funding vital services and infrastructure through tax and royalty payments.
- 1.3 The Facility's operation also generates substantial greenhouse gas emissions from the combustion of diesel fuel used in mining equipment and vehicles. These emissions, classified as Scope 1 emissions, represent the direct release of carbon dioxide and other greenhouse gases from sources owned or controlled by the Facility.
- 1.4 The Facility is connected to the South West Interconnected System (SWIS), enabling the Facility to reduce its Scope 2 emissions, indirect emissions from the consumption of purchased electricity. Newmont's approach to reducing total site emissions is focused on decreasing Scope 2 emissions.
- 1.5 In alignment with this strategy, the Responsible Emitter is investigating Purchase Power Agreements (PPA) with several renewable energy projects in Western Australia to further reduce the carbon intensity of the electricity it consumes.
- 1.6 The Responsible Emitter had previously examined the feasibility of developing a behind the meter windfarm on land adjacent to the Facility owned by the Responsible Emitter, however on the basis of a smaller than anticipated wind resource being available and an increase in projected capital costs, these studies have been put on hold while PPAs with existing renewable energy providers are investigated.

## 2. LIMITATIONS IN AVAILABLE TECHNOLOGIES

- 2.1 The primary challenge faced by the Facility in achieving higher levels of Scope 1 carbon abatement during the monitoring period related to constraints associated with the transition from diesel-powered to electric mining vehicle and equipment, including:
- (a) **Technological readiness level:** the current state of technology for electric mining vehicles and equipment has not yet reached a level that can fully replace diesel vehicles and equipment without compromising operational efficiency and reliability. Electric alternatives for heavy-duty mining equipment are still in the early stages of development and are not widely available in the market.
  - (b) **Infrastructure requirements:** the infrastructure necessary to support a fully electric fleet, including charging stations and power supply upgrades, is not yet in place.
  - (c) **Performance and durability:** electric equipment suitable for mining operations must meet rigorous performance and durability standards, which available technology does not yet achieve consistently.
  - (d) **Equipment availability:** electric heavy-duty mining equipment is still in early development and not widely available.
  - (e) **Battery technology:** current battery technology does not yet provide the necessary energy density and lifespan required for demanding mining operations. Advances in battery technology are essential for this transition.
- 2.2 Due to the above limitations, the Facility managed its safeguard baseline for the relevant monitoring period through Australian Carbon Credit Units (ACCUs).

## 3. REGULATORY AND OTHER BARRIERS

- 3.1 In addition to technological limitations, there are several other barriers that have affected the level of carbon abatement at the Facility:
- (a) **Financial barriers:** the financial investment needed for electric equipment and the required infrastructure upgrades is significant and poses a major hurdle to implementation. The cost of replacing a fleet of diesel equipment with electric alternatives is currently prohibitively high, and the return on investment is long term.
  - (b) **Fleet replacement:** the process of phasing out diesel equipment and replacing it with electric alternatives requires careful assessment, planning, procurement and training.
  - (c) **Operational barriers:** transitioning to new technologies involves disruptions to operations, which can affect safety and productivity.

## 4. FUTURE OPPORTUNITIES FOR CARBON ABATEMENT

- 4.1 Despite these limitations and barriers, the Responsible Emitter is committed to exploring and implementing future opportunities for carbon abatement at the Facility, including by:
- (a) **Technological advancements:** continuing to monitor and invest in emerging technologies that can enhance carbon abatement efforts, particularly in electrification and renewable energy integration.
  - (b) **Collaboration and partnerships:** collaborating with technology providers, industry partners, and research institutions to accelerate the development and deployment of effective carbon abatement solutions. These partnerships can foster innovation in areas like energy storage

systems and grid integration, further supporting the use of renewable energy in mining operations. For example, Newmont's partnership with Caterpillar has focused on reducing carbon emissions from diesel powered machines. This collaboration has resulted in the implementation of validation and testing of the Early Learner 793XE battery electric haul truck at the Newmont Cripple Creek and Victor mine site in Colorado, USA.

- (c) **Infrastructure development:** planning and implementing the necessary infrastructure upgrades to support a transition to electric equipment, including expanding the charging network and ensuring a stable power supply to the Facility.


## 5. COMMERCIALLY SENSITIVE INFORMATION

- 5.1 The following information included in this explanation is commercially sensitive and should be treated with redacted before publication:
  - (a) **Details of specific investments:** information regarding the financial investments made, planned or otherwise for carbon abatement technologies and infrastructure upgrades, in particular paragraph 1.6.
  - (b) **Proprietary technology collaborations:** any proprietary technologies or collaborations with technology providers that are under development or consideration, in particular paragraph 4.1(b).

## 6. CONCLUSION

- 6.1 While challenges and barriers have affected the level of carbon abatement at the Facility during FY23-24, the Responsible Emitter remains committed to pursuing future opportunities and overcoming these obstacles. Investment in technology, infrastructure development, and collaborative efforts will be crucial in achieving greater carbon abatement in the future.

Sincerely,

DocuSigned by:  
  
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Stephen Cole  
Head Finance Australia (Executive Officer)  
Newmont Boddington Pty Ltd  
28-Jan-25