

Standard 12

CLIMATE CHANGE AND ENERGY MANAGEMENT

12.1 STANDARD

The purpose of this B2Gold Environmental and Biodiversity Standard - Climate Change and Energy Management is to define the requirements for managing climate risk and reducing greenhouse gas (GHG) emissions, including the requirements of B2Gold's climate risk management strategy and its climate change and energy-related targets.

Relevant aspects of climate and energy management are defined; inclusive of energy auditing, identification of climate risks, Climate and Energy Management Plan, determination of Scope 1, 2 and 3 GHG Emissions; energy awareness, reporting and monitoring.

12.2 CRITERIA AND REQUIREMENTS

12.2.1 Regulatory Compliance

Based on applicable in-country regulatory standards, sites shall demonstrate implementation of GHG and energy efficiency measures to comply with relevant local, state, and federal regulatory requirements relating to energy efficiency and greenhouse emissions.

12.2.2 International Accords and Agreements

Sites shall support the objectives of relevant global climate accords through avoidance, reduction or mitigation of GHG emissions. Programs shall be developed and implemented to ensure that B2Gold sites and nearby communities, as much as practical, are resilient to the effects of climate change.

12.2.3 Energy Audits

Sites shall commission and conduct a baseline energy audit to determine operational and equipment performance. The audit shall be used to benchmark energy use (including an analysis of site energy use and benchmarking against leading industry practices) and to identify and evaluate energy saving opportunities based on key criteria; such as implementation costs, energy and GHG reductions and relevant payback periods.

Site energy audit(s) shall enable sites to improve their understanding of energy use and costs, and to prioritize energy savings opportunities. Estimates for cost savings shall be determined, based on energy price projections in future years.

Reports from energy audits shall define the estimated costs and benefits of potential energy efficiency projects that are outlined.

12.2.4. Identification of Climate Risks

Climate risks and opportunities at sites shall be identified through standard risk management processes and integrated into the enterprise risk management system.

Relevant climate risks from each site shall be presented to the B2Gold HSESS Committee.

12.2.5 Climate and Energy Management Plans

Sites shall develop, implement and maintain a formal Climate and Energy Management Plan that defines the following minimum requirements:

- identifying climate risks for integration into decision-making, from design and planning through to closure

- identifying adaptation/mitigation measures to reduce vulnerability to climate change risks
- ensuring that GHG emissions are adequately estimated and monitored over time
- establishing an energy consumption baseline, setting clear and measurable goals to drive energy management improvement, and tracking progress towards such goals
- determining the site strategies, processes, and technologies needed to achieve energy reduction goals
- identifying control measures used by the site to minimize energy use and improve energy efficiency.

To improve energy performance and efficiency, sites shall reference and utilize the concepts defined in ISO50001:2018 – Energy Management Systems – requirements and guidance for use.

Site Climate and Energy Management Plans shall be periodically reviewed to assess implementation, identify lessons and potential consideration and inclusion of best practices.

When changes to the business context occur, such as new developments, procurement, mine expansions or business improvement projects, opportunities shall be used to improve energy performance.

12.2.6 Determination of Scope 1, 2 and 3 GHG Emissions

Sites shall complete GHG emissions inventories for Scope 1 (direct) emissions from owned or controlled sources.

Relevant B2Gold sites shall complete GHG emissions inventories for Scope 2 (indirect) emissions from the generation of purchased electricity.

Sites shall complete inventories for Scope 3 GHG emissions; inclusive of relevant upstream categories, shall be determined.

12.2.7 Climate Champions

Sites shall appoint and maintain an appropriate number of Climate Champions. These nominated representatives shall support the site in meeting B2Gold's Climate Risk Management Strategy by assisting in the identification of climate-related risks, opportunities, and priorities across B2Gold, and by ensuring that relevant tasks to reduce GHG emissions are actioned and achieved.

12.2.8 Performance Measures and Action Plans

Site energy performance goals and targets shall be reviewed and updated annually.

Improvements in energy efficiency and GHG emissions from sites shall include, but not be limited to:

- energy supply and procurement
- buildings
- blasting
- on-site materials movement
- minerals processing
- air, water and ancillary equipment.

Incorporated into each site's HSE MS Improvement Plans, sites shall ensure that actions identified by the corporate Climate Risk Management Committee are scheduled, resourced and implemented. Site General Managers shall have overall site accountability for their implementation and completion.

12.2.9 Reporting

Sites shall provide relevant data and information to the B2Gold Corporate office, to allow B2Gold to report annually on climate risk and energy management in their Responsible Mining Report and Climate Strategy Report (i.e. to allow B2Gold to maintain alignment with the recommendations of the TCFD).

12.2.10 Climate and Energy Awareness

Sites shall demonstrate ongoing processes to embed climate risk and energy management into the culture of their operation.

Site personnel and contractors shall maintain a high level of climate risk and energy awareness and the role they play in achieving energy goals. Best practices and lessons learned shall be shared with relevant personnel.

Sites shall identify and create incentives to motivate staff and contractors to improve GHG emissions and energy performance.

12.2.11 Energy Monitoring

Monitoring programs shall be implemented to collect, interpret and report on energy data in order to measure and verify energy performance and to locate opportunities for reducing energy use and cost.

Energy monitoring systems shall provide both real time and historic electricity usage information.

Sites shall demonstrate a continuous review of energy performance, inclusive of those applicable to relevant processes and related equipment.

12.3 REFERENCE MATERIAL

Task Force on Climate-related Financial Disclosures (TCFD) (2017)

B2Gold Climate Strategy Report (February 2022)

World Gold Council - Responsible Gold Mining Principles – Principle 10.3 - Combating climate change and Principle 10.4 – Energy efficiency and reporting (September 2019)

Mining Association of Canada - Energy and GHG Emissions Management Reference Guide (March 2015)