



sherritt

2023 Climate Report

Table of Contents

About This Report..... 1

Our Operations..... 2

1 Our Approach..... 3

1.1 Contributing to a Lower-Carbon Future 3

2 Governance..... 4

2.1 Role of the Board 4

2.2 Role of Senior Management 4

2.3 Assurance and Oversight 5

3 Strategy 6

3.1 Capital Allocation 7

3.2 Operational Strategy and Mine Planning 7

4 Climate-related Risks and Opportunities 8

4.1 Risk Identification 8

4.2 Climate Scenario Risk and Opportunity Analyses 8

5 Metrics and Targets 11

5.1 Current Targets 11

5.2 Performance Metrics 11

6 Future Initiatives 12

Commonly Used Terms

Acronym Used	Definition
TCFD	Task Force on Climate-related Financial Disclosures
JV	joint venture
ROC	Reserves, Operations and Capital
ESG	environment, social, and governance
COO	Chief Operating Officer
CCO	Chief Commercial Officer
CEO	Chief Executive Officer
GHG	greenhouse gas
MAC	Mining Association of Canada
TSM	Towards Sustainable Mining
CO ₂	carbon dioxide
ECOG	economic cut-off grade
IPCC	Intergovernmental Panel on Climate Change
IEA	International Energy Agency
MWh	megawatt hour
CO _{2e}	carbon dioxide equivalent
GJ	gigajoule

Forward-looking Statements

This report may contain forward-looking information, please refer to the Forward-looking Statements disclaimer in the [2023 Sustainability Report](#).

About This Report

This is Sherritt International Corporation's ("Sherritt" or "the Company") fourth published Climate Report. This report focuses on disclosures for areas of the business where there are relevant disclosures to be made. While previous year's reports were prepared in alignment with the now decommissioned Task Force on Climate-related Financial Disclosures (TCFD) recommendations, this year's report is focused on alignment with disclosure standards that have since replaced the TCFD recommendations¹. Key components of this report include a discussion of Sherritt's current climate-related governance structure ([Section 2](#)), strategy ([Section 3](#)), risks and opportunities ([Section 4](#)), and interim targets ([Section 5](#)).

¹ [IFRS - IFRS Foundation welcomes culmination of TCFD work and transfer of TCFD monitoring responsibilities to ISSB from 2024](#)

Our Operations

Sherritt is a world leader in using hydrometallurgical processes to mine and refine nickel and cobalt – metals deemed critical for the energy transition. Sherritt’s Moa Joint Venture (“the Moa JV”) has a current estimated mine life of 25 years and has embarked on an expansion program focused on increasing annual mixed sulphide precipitate production by approximately 20% of contained nickel and cobalt. The Company’s Power division, through its ownership in Energas S.A., is the largest independent energy producer in Cuba with installed electrical generating capacity of 506 MW, representing approximately 10% of the national electrical generating capacity in Cuba. The Energas facilities are comprised of two combined cycle plants that produce low-cost electricity from one of the lowest carbon emitting sources of power in Cuba.

For a detailed overview of the business in 2023, please refer to Sherritt’s [2023 Annual Information Form](#).

Metals

Sherritt has a 50/50 partnership with General Nickel Company S.A. of Cuba in the Moa JV.

The Moa JV is a vertically integrated JV that mines, processes and refines nickel and cobalt for sale worldwide (except in the United States). The JV has an open pit lateritic ore mine and processing facility in Moa, Cuba where ore is processed into mixed sulphide precipitate containing nickel and cobalt which is then transported to the refining facilities in Fort Saskatchewan, Alberta, Canada. The resulting nickel and cobalt products are sold to various markets, primarily in Europe and Asia.

The refinery facilities in Fort Saskatchewan have an annual combined production capacity of approximately 38,200 tonnes of nickel and cobalt.

This program capitalizes on the growing demand for high purity nickel and cobalt being driven by the accelerated adoption of electric vehicles and builds on the 29-year successful track record of the Moa JV.

Sherritt has a wholly-owned fertilizer business in Fort Saskatchewan that provides inputs (ammonia, sulphuric acid, and utilities) for the Moa JV’s metals refinery, and produces agriculture fertilizer for sale in Western Canada.

The Corporation’s Metals Marketing division includes its 100% interests in subsidiaries established to buy, market and sell certain Moa JV’s nickel and cobalt production.

Within the report, the operations in Moa will be referred to as “Moa Nickel” and the operations in Fort Saskatchewan will be referred to as “the Fort Site”.

Power

Sherritt holds a one-third interest in Energas S.A., a Cuban JV corporation established to operate facilities for the processing of raw natural gas and the generation of electricity for sale and delivery to the Cuban national electrical grid system.

The remaining two-thirds interest in Energas are held equally by two Cuban government agencies: Unión Eléctrica and Unión Cubapetróleo.

Within the report, the Power operations will be referred to as “Energas”.

1 Our Approach

Sherritt recognizes businesses have an opportunity to contribute to developing solutions for global climate-related challenges and acknowledges that both nickel and cobalt have been listed on Canada’s and the United States’ “Critical Minerals” lists¹. Sherritt supports the international climate change goals outlined in the United Nations Framework Convention on Climate Change and, the Paris Agreement, and recognizes the important role the Company can play in the shift to a low-carbon economy by implementing measurable steps towards decarbonizing operations and bringing to market the materials and technologies needed for a lower-carbon future.

1.1 Contributing to a Lower-Carbon Future

Transitioning to a low-carbon future implies a significant increase in demand for metals produced by Sherritt’s Metals division, such as nickel and cobalt. These minerals are used in low-carbon and carbon-neutral technologies such as electric vehicle batteries and energy storage solutions for renewable power sources. Additionally, as a long-term partner in Energas, Sherritt has brought both technical and operational expertise to lower-carbon intensity power production in Cuba, which supports the country’s energy security needs and has resulted in measurable carbon reduction for Cuba’s grid. Additionally, Sherritt’s Technologies Group creates innovative process solutions for natural resource-based industries around the world to improve environmental performance and increase economic value.



¹ [Critical minerals in Canada - Canada.ca](https://www.nrc.ca/critical-minerals) | [U.S. Geological Survey Releases 2022 List of Critical Minerals](https://www.usgs.gov/energy/critical-minerals) | [U.S. Geological Survey \(usgs.gov\)](https://www.usgs.gov/)

2 Governance

As a reflection of the relative importance of climate-related considerations to the Company, Sherritt’s Board of Directors and executive team have integrated climate change risks and opportunities into all levels of the Company’s strategic planning and enterprise risk management processes.

2.1 Role of the Board

Sherritt’s [Board of Directors](#) (“the Board”), which is led by a non-executive Chair, provides oversight on all strategic matters affecting or affected by the Company, including risks and opportunities related to climate change. The Reserves, Operations and Capital (ROC) Committee of the Board, oversees the management of all environment, social, and governance (ESG)-related matters, which includes reviews of climate change-related plans, targets, and performance. The ROC Committee meets at least four times per year, conducts in-person visits to the operations (physically, or when not so permitted, virtually), and receives informational updates from corporate and divisional management via quarterly meetings, and more often when required. Sherritt’s Board and ROC Committee include an expert on decarbonization and climate change management. All Board member biographies can be found [here](#) and the self-assessed skills and competencies of each member are outlined in the [2024 Management Information Circular](#). Risk management and assurance activities associated with climate change data collection, and resource allocation is also reviewed by the Sherritt Board Audit Committee. The mandate of each of the Board, ROC and Audit Committees can be found on Sherritt’s [website](#).

2.2 Role of Senior Management

In addition to direction and priorities set out by the Board, the Vice President of Sustainability, the Chief Commercial Officer (CCO), and the Chief Operating Officer (COO), the latter two of which report directly to the President and Chief Executive Officer (CEO), are accountable for Sherritt’s climate strategy and targets, and ensuring the successful delivery of climate-related initiatives across the organization. The ESG Steering Group identifies priorities for the ESG Working Group, which delivers on these across the organization and reports back to the Steering Group on outcomes as appropriate. ESG responsibilities are a part of all department and division mandates to ensure priorities are embedded across all parts of the business.



2.3 Assurance and Oversight

Table 1 below indicates the various forms of internal and external assurance conducted on Sherritt's climate change disclosures. Following assurance, the Board and management teams review the results to inform future actions and strategic plans.

Table 1. Assurance Measures Related to Climate Change

Assurance Type	Organization	Items Reviewed
External	Mining Association of Canada: Towards Sustainable Mining assurance	<ul style="list-style-type: none"> • Energy use and GHG emissions management systems • Energy use and GHG emissions reporting systems • Energy use and GHG emissions performance targets
	Greenhouse Gas (GHG) Regulation Assurance (Alberta, Canada)	<ul style="list-style-type: none"> • Validation of GHG data reported and quantification of methodologies
Internal	Corporate Reserves, Operations and Capital Committee	<ul style="list-style-type: none"> • Sustainability reporting systems, including climate change-related data • Sustainability and climate change performance
	Audit Committee	<ul style="list-style-type: none"> • Sustainability data QA/QC process systems management, including climate-related data

3 Strategy

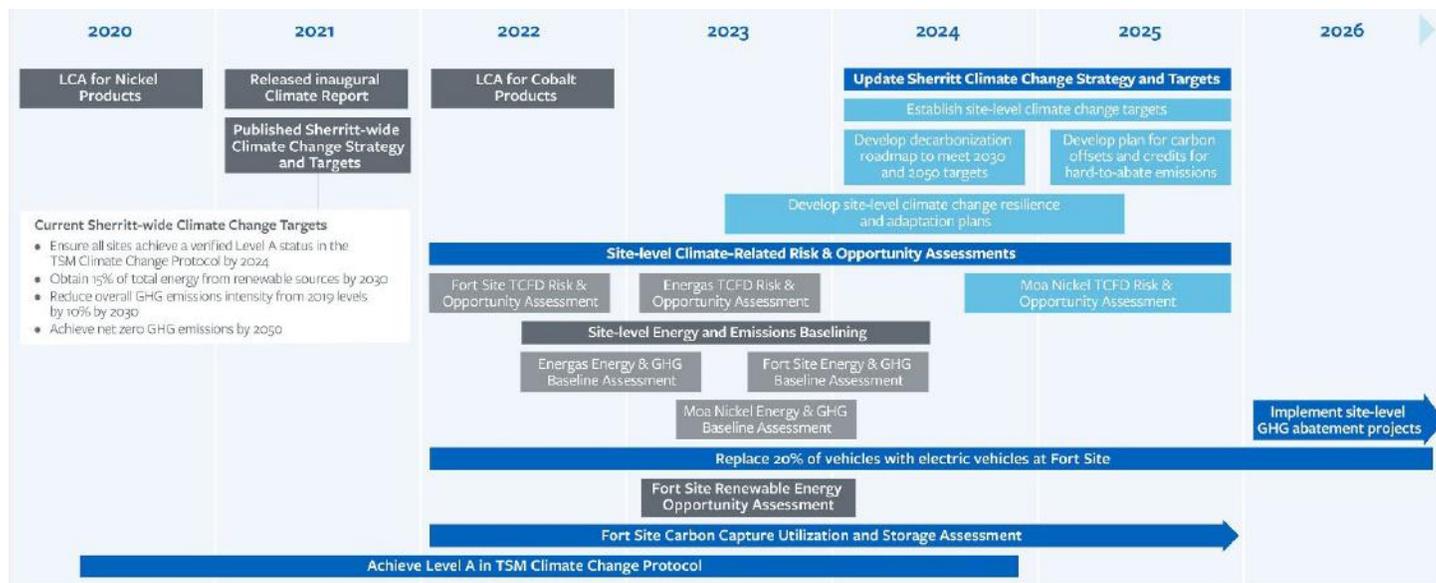
Sherritt has established a climate change strategy, decarbonization roadmap, and interim and aspirational targets for reducing the Company’s carbon footprint. Sherritt’s strategy is designed to align with the [Mining Association of Canada’s \(MAC\) Towards Sustainable Mining \(TSM\)](#) initiative and is informed by four guiding principles: Adapt, Mitigate, Innovate and Enable.



To further implementation of this strategy, throughout 2023, Sherritt advanced the baseline data collection and GHG mitigation options analyses at its sites. Additional climate-related initiatives pursued throughout 2023 include:

- Completed a climate risk and opportunity assessment for the Energas operations;
- Conducted baseline energy/GHG emissions assessments of the Moa Nickel and Fort Site operations, completed in the first half of 2024;
- The Technologies division completed steam balance modelling work at Moa Nickel to identify opportunities to reduce fuel oil consumption; and
- Completed a preliminary evaluation of renewable energy opportunities for the Fort Site.

Moving forward, Sherritt will continue to integrate the information from the energy/GHG baseline assessments and the findings from the climate risk and opportunity assessments into site-specific abatement and climate change resilience and adaptation plans. It is anticipated this work will result in the establishment of empirical-based targets, for the Metals division (Moa Nickel and Fort Site) and the Power division (Energas) respectively, and ready the organization for future regulatory reporting guidelines.



In addition to executing on climate-specific initiatives, Sherritt made progress on further integrating identified climate-related risks and opportunities into the Company’s overall business strategy and financial planning processes.

3.1 Capital Allocation

Sherritt’s capital allocation processes prioritize the production of commodities essential to the transition to a low-carbon economy and increasing electricity production from lower carbon emitting sources to the Cuban grid. Considerations include operational approaches to decarbonization, capital investments required to improve energy efficiency and reduce GHG emissions, and strategies to incorporate more renewables into Sherritt’s energy mix. In future years, Sherritt anticipates releasing further information on how capital allocation is tied to the Company’s climate change strategy through integrated financial disclosures.

3.2 Operational Strategy and Mine Planning

Where it has been economically feasible to do so, Sherritt has worked to integrate climate-related considerations into longer-term operational strategy and mine planning. Examples of some key projects of focus over the past couple of years are described below:

1. **Carbon Capture and Storage:** In 2022 and 2023, Sherritt advanced the evaluation of opportunities for carbon capture, utilization, and storage at the Fort Site. Sherritt engaged several potential partners to sequester pure CO₂ emissions. This work would generate enough carbon credits to meet Sherritt’s obligations, with additional credits remaining to be sold on the market. Currently Sherritt and other industry players in Alberta are waiting to secure longer-term contracts for reliable carbon sequestration. The delays for available projects are due to high market demand and outstanding provincial government approvals.
2. **Improving understanding of Scope 3 emissions:** Sherritt is working to better understand the Scope 3 emissions of the Company’s products and suppliers through collaboration with value chains. An identification of material Scope 3 emissions for Energas, Moa Nickel and the Fort Site have been summarized in each of the respective energy/GHG baseline assessments that have been completed.
3. **All Sherritt operations are in the process of implementing the new TSM [Climate Change Protocol](#).** To support this, a gap analysis against the Protocol was conducted as part of energy/GHG baseline assessments undertaken at Moa Nickel, the Fort Site and Energas, respectively. Currently the Fort Site has achieved Level A in this Protocol.
4. **Site-specific GHG Reduction Initiatives:** In 2023, the refinery continued to action its Energy and Greenhouse Gas Improvement Plan. This plan involves several energy-reduction projects to assess feasibility and value-add potential to the Company.

5. Expansion Strategy and Investment: Throughout 2022, Sherritt completed studies for an updated National Instrument 43-101 technical report, "[The 2023 Moa JV Technical Report](#)", which incorporates a newly developed strategic life of mine plan based on a revised economic cut-off grade (ECOG) methodology. This updated ECOG maximizes resource utilization and minimizes the treatment of material with high acid consumption which has the potential to reduce the carbon intensity of the Company's products. In 2023, work was also advanced on several efficiency improvement plans for the expansion project at Moa Nickel, such as the construction of a new Slurry Preparation Plant that will reduce haul distances and the consumption of diesel.

4 Climate-related Risks and Opportunities

4.1 Risk Identification

Sherritt's senior management team is responsible for identifying climate-related risks and opportunities for the business. This is done through consultation with key personnel at each of the operations, who have been directed to consider mechanisms for reducing emissions and raising awareness of potential short-, medium-, and long-term risks to site infrastructure and the health and safety of employees and local communities based on the completion of independent climate change baselines and risk assessments.

In addition, senior management representatives participate actively in third-party organizations, such as MAC, and regularly attend conferences to continue to enhance the organization's understanding of evolving standards, regulations, and financial or operational carbon offset opportunities.

In 2023, Sherritt continued to evaluate climate-related risks and opportunities through a series of independently facilitated climate risk and opportunity assessments. These assessments involved extensive consultations with relevant members of management to ensure that climate-related risks and opportunities are well understood and that the implementation of mitigating or enhancing actions is being completed across all levels of the organization.

4.2 Climate Scenario Risk and Opportunity Analyses

Independently facilitated climate scenario analyses for both the Fort Site and Energas operations were completed between 2022 and 2024. The physical risk assessment component of these analyses used [Intergovernmental Panel on Climate Change \(IPCC\) scenarios](#) representing a potential global baseline temperature rise well below 2°C and a high emissions stress test temperature rise of 4°C. The carbon tax component of the risk assessment considered prices motivated by the [International Energy Agency \(IEA\) announced pledges](#) and [net zero emissions scenarios](#). The outcomes of these analyses provided Sherritt with business-relevant information on the type and severity of identified climate-related physical risks and transition risks and opportunities.

The following summarizes the outcomes of these analyses. Although these are based primarily on assessments conducted for the Fort Site and Energas, it is expected that physical risks identified for Energas will likely be comparable for Moa Nickel, and that the transition risks identified for the Fort Site will transfer to Moa Nickel as well. As a general caveat, it is worth noting that Sherritt expects that the following risks, opportunities, and response management strategies will continue to evolve over time.

4.2.1 Physical Risks and Mitigation Strategies

The physical risk and opportunity assessment component of the analyses used standardized IPCC scenarios, including a baseline scenario based on current projected emissions trajectory and a high emissions stress test scenario.

Canada

In Canada, extreme weather events, such as floods, wildfires, hurricanes, and droughts, as well as changes in precipitation patterns, temperature, sea levels, and storm frequency, may affect site operations, critical infrastructure, supply routes, and the local communities over the medium-term (5-10 years) to long-term (10+ years).

Climate-related physical risks were identified for the Fort Site through the 2022 climate risk and opportunity assessment. Limited physical and financial impacts were identified based on existing data. Long-term, worst-case physical climate risks identified include increased risk of wildfire near the site, and coastal flooding at the port of Halifax and resulting rail disruption. The Fort Site has incorporated these physical risks and others identified into their Climate Change Mitigation and Adaptation Plan.

Cuba

In Cuba, top physical risks identified include corrosion, chemical storage risks, storm surges due to increasing wind/hurricanes and fire due to low precipitation/drought. At all Energas facilities, in the short-term (1-5 years) to medium-term (5-10 years), increasing wind, tropical storms, and temperatures may cause accelerated infrastructure corrosion, and increased risk of fires. Energas has pre-existing

maintenance and asset management procedures in place to limit the risk of infrastructure corrosion and fires however, in 2024, Energas will incorporate these physical risks to improve their Climate Change Mitigation and Adaptation Plan.

To mitigate immediate risks posed to Sherritt's assets by a changing climate, changing weather conditions are closely monitored and operating and emergency preparedness processes are modified as appropriate. The integrity of the Company's assets, including operating facilities and tailings storage facilities, is externally reviewed regularly against the potential impact of extreme weather events. Sherritt engages with logistics and supply chain partners to understand and support their efforts to mitigate and adapt to changing climate patterns.

Sherritt has incorporated the findings of this assessment into the Company's overall enterprise risk management framework to prioritize risks and opportunities and their associated financial impacts.

4.2.2 Transition Risks, Opportunities and Management Strategies

The transition risk and opportunity assessment component of the analyses used IEA scenarios based on future energy trends. Both the Fort Site and the Energas transition risk and opportunity assessment used the baseline [Announced Pledges Scenario 2030](#) and the stress test [Net Zero Emissions by 2050 Scenario](#). Transition risks and opportunities were identified for the four key areas of market, policy and legal, technology, and reputational.

In this section, transition risks and opportunities are discussed at an organizational level, with reference to specific business units or sites considerations identified where relevant.

Market Risk & Opportunity - Access to capital

Over the short- to long-term (2+ years), inadequate performance against climate objectives is speculated to have the potential to impact Sherritt's access to capital or insurance, increase the cost of financing, or lead to divestment of shares as investors migrate away from companies with lower ESG performance.

In part to offset this potential risk, Sherritt maintains strong relationships with lenders and insurers and continues to actively and transparently engage on ESG-related issues. Sherritt has several initiatives with specific targets underway to improve overall ESG performance, mitigate risks, and remain relevant and attractive for investors and other stakeholders.

Market Risk & Opportunity - Product demand

Variations in commodity use from emerging technologies, the move towards renewable energy generation, a circular economy and policy changes over the medium- to long-term (5+ years) may affect demand for Sherritt's products, both positively and negatively.

Sherritt avidly tracks and responds to downstream regulatory and technology developments. With respect to potential changes in product demand, it is expected that Sherritt will be required to adapt to market needs, and will likely experience an overall net benefit, particularly due to the high demand for nickel and cobalt in energy storage and electric vehicle batteries.

Additionally, in Cuba, the demand for reliable, clean power is an identified market opportunity for Sherritt. Sherritt's power operations generate approximately 30% less GHG emissions per MWh of power than the average power produced on the Cuban grid. As a long-term partner in Energas, Sherritt has brought both technical and operational expertise, which supports Cuba's energy security needs and carbon reduction initiatives.

Market Opportunity - Technology innovation

Sherritt is pursuing several promising innovations with lower carbon emission potential solutions for the mining and oil and gas industries, as described below. In bringing these innovations to market, Sherritt will contribute to industrial decarbonization efforts.

1. **Expanding Midstream Refining Capacity:** In 2023, Technologies completed a continuous pilot test and advanced the mixed hydroxide precipitate test program, which is supported by a funding commitment from Natural Resources Canada, as part of Sherritt's strategic objective for expanding midstream processing capacity of critical minerals for the electric vehicle supply chain in North America.
2. **Next-Generation Laterite Processing (5+ years):** Nickel is a key component of future technologies that demand high-strength alloys and a pivot from hydrocarbons to electrical energy systems. The availability of such large quantities of nickel in the future can only be assured by the processing of laterite ores. Sherritt is currently investing in a focused process development program that seeks to make laterite processing both more economically attractive and environmentally sustainable, through lowered carbon footprint, increased by-product value generation, and greater extraction selectivity.

3. Treatment of Complex, High-Arsenic Concentrates (1-5 years): Sherritt has developed a suite of proprietary processes (Chimera and D-POX) for the treatment of complex copper and precious metals concentrates (or other high arsenic content feeds) that enable high recoveries of base and precious metals while providing a step change in the stabilization of arsenic bearing solid waste and eliminating the release of these contaminants into the air and surrounding environment.

Policy Risk - Carbon pricing and credits

In the short term (1-5 years), fluctuations in carbon pricing schemes and other direct taxes on the business may create additional costs through the value chain that could negatively impact the profitability of the organization. Conversely, it is also expected these regulatory changes could increase the demand for lower-carbon alternatives that are fueled by materials Sherritt supplies.

Overall, Sherritt expects the organization to remain resilient in the face of increasing carbon prices in Canada. Carbon price sensitivities have been incorporated into the Company's long-term business plan. Furthermore, in the second quarter of 2024 an energy/GHG baseline assessment for the Fort Site was completed, which quantified emissions and identified opportunities for absolute emissions reductions. Identified opportunities that are expected to result in potential carbon pricing savings will be prioritized and integrated starting in 2025.

In Cuba, Energas can register GHG emission-reduction projects with the United Nations clean development mechanism to earn certified emission reduction credits. These credits can be traded, sold, and used to meet certain emission reduction targets. In 2023, an energy/GHG emissions baseline assessment of the Energas business was completed which quantified operational emissions and identified emission reduction opportunities for the Cuban grid. Identified opportunities will be prioritized and integrated starting in 2024. This same baseline assessment is currently underway for Moa Nickel and is to be completed in the first half of 2024.

Currently, Sherritt does not operate under an internal carbon price system. In the short term, it may become a requirement of corporate memberships that Sherritt subscribes to or of Sherritt's customers as a condition of doing business. Sherritt will continue to monitor requirements for such a system.

Policy Risk - Regulatory developments

Government regulatory developments expected in the next 5-10 years (medium-term) in support of emissions reductions, battery regulations and proposed border adjustments for carbon-intensive products have the potential to affect operations and sales due to restrictions in operating permits, energy regulations, emissions caps, or access to markets.

Sherritt monitors and participates in discussions related to public policy development on carbon and regulatory issues, both directly with government agencies, where appropriate, and through industry organizations such as [MAC](#), the [Fertilizer Institute](#), the [Nickel Institute](#), and the [Cobalt Institute](#).

Reputation Risk

Over the short- to long-term (2+ years), inadequate performance against climate objectives including the reduction of GHG emissions and management of climate-related physical risks may result in negative impacts to Sherritt's reputation causing demand and divestment risks as investors migrate away from companies with lower ESG performance.

Furthermore, Sherritt is aware of the potential increasing pressure it may be subject to as a result of GHG emissions produced by Energas operations. Energas' total GHG emissions comprise over 72% of Sherritt's Scope 1 and Scope 2 emissions. However, Energas operations provide a less carbon-intensive and reliable power source to the Cuban grid, which currently operates in a deficit. Sherritt's power operation generates approximately 30% less GHG emissions per MWh of power than the average power produced on the Cuban grid. Accordingly, Sherritt remains of the position that despite potential negative reputational risks, Energas provides a net benefit towards a just transition, both by offering a cleaner energy alternative and by providing an additional reliable energy source to the Cuban grid.

5 Metrics and Targets

Sherritt has established the following targets that are informing the priorities of the Company as science-based targets based on Representative Concentration Pathway modelling are established.

5.1 Current Targets

In 2019, Sherritt established interim aspirational targets aligned with the Paris Agreement:

- Achieve net zero GHG emissions by 2050;
- Reduce overall GHG emissions intensity from 2019 levels by 10% by 2030;
- Obtain 15% of total energy from renewable sources by 2030; and
- Ensure all sites achieve a verified Level A status in the TSM [Climate Change Protocol](#) by 2024.

As an outcome of the progress made in 2022 and 2023 to complete baseline GHG assessments at each of the sites, during 2024, Sherritt intends to update its short-term (2030) climate targets for both the Metals and Power divisions, respectively. As reported, these will be empirical-based targets, with increased clarity on absolute carbon abatement, carbon intensity reductions, and energy from renewable sources. Sherritt will report on the identification of new targets, and its progress on meeting these as information becomes available.

5.2 Performance Metrics

Sherritt is in the process of developing climate and energy management systems that will improve how climate-related risks and opportunities are evaluated and managed. Sherritt is also considering how the Company's climate change commitments can be further reflected in Sherritt's governance and assurance structures, disclosure plans, and potentially relevant remuneration schemes for executive management.

Sherritt reports performance relative to existing climate change objectives by disclosing Scope 1 and 2 emissions data separately for its Metals and Energas businesses in its annual sustainability report. For ease of reference, this information is also available in Tables 2 and 3 below.

As indicated in Tables 2 and 3 below, compared to the previous year, emissions in 2023 and the amount of energy required to produce Nickel and Cobalt remained relatively stable within the Metals business. At Energas, there was a significant increase in net power generation, which resulted in a corresponding increase in Scope 1 emissions, although it is worth noting that the total emissions per GJ produced did not see a material increase.

Table 2. Metals Business Emissions and Production Values¹

		2023	2022
Emissions ²	Scope 1 GHG emissions (tonne CO ₂ e)	864,392.509	923,132.712
	Scope 2 GHG emissions (tonne CO ₂ e)	110,377.822	119,558.000
Production	Cobalt (tonne)	2,876.000	3,367.075
	Nickel (tonne)	28,672.000	32,267.933

¹ No external assurance of this data has occurred for the years reported here.

² Production and Scope 1 and 2 emissions values are inclusive of both Sherritt and the joint venture partner's emissions. In opting to facilitate this disclosure on our partner's behalf, the total emissions attributed to Sherritt are over-represented. The total of each of these values that can be attributed to Sherritt is 50% due to the level of equity ownership by Sherritt in this joint venture.

Table 3. Energas Business Emissions and Production Values¹

		2023	2022
Emissions ³	Scope 1 GHG emissions (tonne CO ₂ e)	3,097,824.788	2,704,379.825
	Scope 2 GHG emissions (tonne CO ₂ e)	66,979.405	27,660.000
Production	Liquid Petroleum Gas (tonne)	8,434.923	6,170.450
	Net Power Generation (GJ)	7,503,021.400	6,745,700.000

¹ No external assurance of this data has occurred for the years reported here.

² Production and Scope 1 and 2 emissions values are inclusive of both Sherritt and the joint venture partner's emissions. In opting to facilitate this disclosure on our partner's behalf, the total emissions attributed to Sherritt are over-represented. The total of each of these values that can be attributed to Sherritt is 33% due to the level of equity ownership by Sherritt in this joint venture.

6 Future Initiatives

The following actions are underway or are planned for 2024-2025:

- Advance the development of a decarbonization roadmap for the organization in 2024;
- Develop climate change resilience and adaptation plans for Energas in 2024;
- Establish updated and realizable short-term (i.e. 2030) targets for disclosure in 2025;
- Complete an independently facilitated climate-related risk and opportunity analysis at Moa Nickel;
- Assess renewable power options at the Fort Site and Moa Nickel;
- Continue to assess opportunities for carbon capture, utilization, and storage for the Fort Site; and
- Continue participation in the Cobalt and Nickel Institute's respective life-cycle assessments.