Mindwire

SUSTAINABILITY REPORT

Introduction

Mindwire Systems Ltd, is committed to playing a pivotal role in addressing climate change by significantly reducing our greenhouse gas (GHG) emissions. With a steadfast focus on sustainability, we have set an ambitious goal to achieve net-zero emissions by 2050. While we do not have Scope 1 emissions, we recognize the importance of addressing both our Scope 2 and Scope 3 emissions, which arise from our electricity consumption, gas consumption and indirect activities, respectively. To ensure continual progress, we review and update our emissions data every year, implementing strategies to reduce our environmental impact. Through efforts such as transitioning to renewable energy, optimizing operational practices, and promoting a culture of environmental responsibility, we are dedicated to leading by example and contributing to a greener, more sustainable future.

Establishing Baselines

Scope 1	Scope 2	Scope 3
		

We have used 2023 data to develop a baseline for our greenhouse gas (GHG) emissions inventory, including disaggregated baselines for our Scope 2 emissions. This disaggregation allows us to better understand the specific sources of our indirect emissions, particularly those related to the electricity and gas we consume. By breaking down Scope 2 emissions into more detailed categories, we can identify opportunities for reduction and implement more targeted strategies to improve energy efficiency and transition to renewable energy sources. This approach ensures that our emissions reduction efforts are precise and effective, helping us work towards our long-term goal of net-zero emissions by 2050. The 2023 baseline provides a clear reference point for tracking and reporting on the progress of our GHG reduction initiatives.

SCOPE 2

ELECTRICITY BASELINES

The absolute baseline for our electricity-related Scope 2 emissions has been calculated using 2023 data, reflecting a total of **3,794.37 kg CO_2e** based on our office's share of electricity consumption within the leased building. This calculation considers our proportional occupancy of the building and aligns with the carbon intensity of the Ontario electricity grid. Establishing this baseline allows us to accurately track progress and identify opportunities for reducing emissions in alignment with our net-zero goals.

1545 Carling Avenue	**96,333**	**square feet**
Suite 308	**5459**	**square feet**
Mindwire Proportion	**0.0567**	**square feet**

Building Energy Consumption	**916,714**	**kWh/year**
Mindwire Proportion	**51,977.68**	**kWh/year**

Ontario Emission Factor for Grid Electricity, approximately:	**0.073**	**kg CO_2e/kWh**

Mindwire Emissions	**51,977.68**	**kWh/year**
Ontario Emission	**0.073**	**kg CO_2e/kWh**
Mindwire Absolute Terms	**3,794.37**	**kg CO_2e/kWh**

Reducing Emissions: Strategies and Actions

Given that we lease our premises and have limited control over major building infrastructure, our organization can still actively work to reduce Scope 2 emissions from electricity usage by focusing on strategies that maximize efficiency within our operational space. Here is our current approach:

Scope 2 Emissions Reduction Plan: Electricity Usage in a Leased Building

1. **Optimize Energy Usage in Our Leased Space**
   - **Efficient Lighting**: Ensure all nonessential lighting is switched off when not in use and ensuring lights are turned off in unoccupied areas.
   - **Smart Power Management for Equipment**: Enable power-saving modes on all office equipment, including computers, printers, and other electronics, and encourage employees to power down at the end of the day.
2. **Engage with Building Management**
   - **Collaboration for Energy Efficiency**: Work with the property management team to discuss energy-efficient upgrades in shared areas, such as lighting, HVAC systems, and windows.
   - **Green Building Certifications**: Celebrate building management in obtaining certifications such as LEED, which focus on energy efficiency and could result in emissions reductions across the entire building.
3. **Encourage Energy-Conscious Behaviors**

- **Employee Training**: Educate employees on energy-saving practices, such as limiting unnecessary printing, reducing screen brightness, and maximizing natural light.
- **Power Down Initiatives**: Establish routines, like "End-of-Day Shutdown" or "Minimal Lighting Days," to encourage staff to actively reduce energy use, particularly during peak demand hours.

4. **Monitor and Report on Energy Savings**
   - **Energy Tracking**: Tracking annual usage can reveal patterns and help identify areas for improvement.
   - **Annual Reporting and Goal Setting**: Regularly report on energy savings and set annual goals, focusing on realistic, incremental reductions within our leased premises.

Goals

- **1-5 Years**: Achieve small but measurable reductions in Scope 2 emissions by optimizing equipment use and collaborating with building management on energy-efficient practices. Mindwire would be aiming for 5% annual reduction as attainable short terms goals while working towards larger reductions by 2030.

By taking these actions, our organization can actively reduce Scope 2 emissions even within a leased property, demonstrating our commitment to sustainability and progress toward net-zero targets by 2050.

GAS BASELINES

To establish our office's Scope 2 GHG emissions baseline from natural gas, we calculated our proportional share of the building's total natural gas consumption based on square footage. Our office occupies approximately 5.67% of the building, translating to an estimated annual natural gas usage of **5,418.585 m^3**. Using the Canadian average emission factor of **1.891 kg CO_2e/m^3**, the resulting Scope 2 emissions for natural gas in the base year of 2023 are approximately **10,244.58 kg CO_2e**. This calculation provides a clear and actionable baseline to guide our efforts in reducing natural gas-related emissions as part of our net-zero strategy.

1545 Carling Avenue	**96,333**	**square feet**
Suite 308	**5459**	**square feet**
Mindwire Proportion	**0.0567**	**square feet**

Building Gas Consumption	**95,550**	**m3**
Mindwire Proportion	**5,418.585**	**m3**

Ontario Emission Factor for Natural Gas, approximately:	**1.891**	**kg CO_2e/m3**

Mindwire Emissions	**5,418.585**	**m3**
Ontario Emission	**1.891**	**CO_2e/m3**
Mindwire Absolute Terms	**10,244.58**	**kg CO_2e**

Reducing Emissions: Strategies and Actions

Scope 2 Emissions Reduction Plan: Gas Usage in a Leased Building

1. **Optimize Use of Window Blinds for Temperature Control**
   - **Seasonal Adjustments**: In colder months, keep blinds open during the day to allow natural sunlight to warm indoor spaces, reducing the demand for heating. In the evenings, close blinds to insulate against the cold and retain warmth, lowering the need for gas-powered heating.
   - **Draft Reduction**: Use blinds as a barrier against window drafts in winter, helping to maintain indoor temperatures without over-relying on the HVAC system.
2. **Temperature Management in Our Space**
   - **Smart Thermostat Usage**: If thermostats are accessible, adjust heating levels in our office space during non-working hours to maintain energy efficiency without compromising comfort.
   - **Collaborate with Building Management**: Coordinate with property management to encourage energy-saving practices building-wide, such as optimized temperature settings and regular HVAC maintenance.
3. **Promote Employee Awareness and Behavioral Changes**
   - **Energy-Saving Practices**: Educate employees on the role of blinds in temperature control, encouraging their proactive use throughout the day. Also, discourage the use of personal space heaters, which increase gas demand.
   - **Encourage Layered Clothing**: Promote a flexible dress code in cooler months, encouraging employees to wear layers to stay comfortable without excessive heating requirements.
4. **Consider Renewable Gas Offsets and Reporting**
   - **Renewable Gas Offsets**: Where possible, consider investing in renewable gas credits to offset emissions from our gas usage, supporting sustainable energy production even if direct reductions are limited by our lease.

- **Regular Reporting and Tracking**: Track and report on gas usage reductions achieved through these efforts, measuring progress against our baseline and setting annual reduction goals.

Goals

- **1-5 Years:** Realize small but measurable gas usage reductions through behavioral changes, efficient use of blinds, and temperature management practices. Mindwire would be aiming for 5% annual reduction as attainable short terms goals while working towards larger reductions by 2030.

By focusing on actionable steps within our control, such as using blinds effectively and promoting responsible heating practices, we can work to reduce gas-related emissions and make meaningful contributions toward our net-zero goals.

SCOPE 3

LAPTOPS

To establish our Scope 3 emissions baseline for laptops, we assessed the lifecycle emissions associated with the 21 laptops used by our organization in 2023. This includes emissions from their production, transportation, usage, and end-of-life disposal. Using standardized emission factors, we calculated the total emissions to provide a clear understanding of the carbon footprint associated with our IT equipment. This baseline serves as a foundation for identifying opportunities to reduce emissions in alignment with our sustainability and net-zero goals.

Laptop GHG Protocol Scope 3 Category Numbers

Lifecycle Stage	GHG Protocol Scope 3 Category	Description	Key Emission Sources
Production	Category 1: Purchased Goods and Services	Manufacturing of laptops, including raw material extraction and assembly processes.	Energy-intensive manufacturing, mining of materials, and processing.
Transportation	Category 4: Upstream transportation and Distribution	Delivery of laptops from manufacturing facilities to office location.	Emissions from shipping and logistics (e.g., trucks, planes, ships).
Usage	Category 11: Use of Sold Product	Emissions generated during the operation of laptops over their useful life.	Electricity consumption during use, depending on energy efficiency and grid carbon intensity.
End-of-Life Disposal	Category 12: End-of-Life Treatment of Sold Products	Management of laptops at the end of their lifecycle, including recycling or disposal.	Emissions from waste processing, recycling operations, or landfilling of components

Lifecycle Stage	**Description**	**Emissions Calculations**	**Total Emissions (kg CO_2e)**
Production	Manufacturing of laptops, including raw material extraction and assembly processes.	21 laptops x 320kg CO_2e/laptop	6,720
Transportation	Delivery of laptops from manufacturing facilities to office location.	21 laptops x 50kg CO_2e/laptop	1,050
Usage	Emissions generated during the operation of laptops over their useful life.	21 laptops x 3.65kg CO_2e/year x 5 years	383.25
End-of-Life Disposal	Management of laptops at the end of their lifecycle, including recycling or disposal.	21 laptops x 10 kg CO_2e/laptop	210
TOTAL			8,363.25

This table provides a breakdown of the estimated emissions for each lifecycle stage, totaling **8,363.25 kg CO_2e** for the baseline year of 2023. It highlights the most significant contributors, such as production and transportation to help guide emission reduction efforts.

Assumptions and Industry Data for Table Calculations

- Purchased Goods and Services (Category 1) - Based on industry data of 320 kg CO_2e as an estimate for emissions from manufacturing 1 laptop.
- Transportation (Category 4) - Based on an average of 50 kg CO_2e per laptop for shipping method and distance travelled.
- Usage (Category 11) - Based on Ontario's electricity grid of 0.073 kg CO_2e per kWh, the average annual emissions from using one laptop is estimated at 3.65 kg CO_2e per laptop per year assuming an average 0.05 kWh per hour use and used for about 1,000 hours per year.

- End-of-Life Disposal (Category 12) - Based on industry data of 10kg CO_2e per laptop as an estimate for the average carbon emissions from disposal, recycling or landfilling processes of a laptop.

To manage and reduce Scope 3 emissions associated with our organization's laptops, we can develop a baseline emissions inventory and set clear strategies for emissions reduction. While Scope 3 emissions are often challenging to address due to their indirect nature, we can take steps to minimize emissions throughout the lifecycle of our laptops, from procurement ,to usage and end-of-life disposal.

Reducing Emissions: Strategies and Actions

Scope 3 Emissions Reduction Plan: Laptops

1. **Sustainable Procurement Practices**
   - **Choose Energy-Efficient Models**: When laptops are due for replacement, select models with energy-efficient certifications, such as ENERGY STAR, and prioritize brands that demonstrate environmental responsibility in manufacturing.
   - **Consider Refurbished Equipment**: Where feasible, consider purchasing refurbished laptops, which reduce demand for new manufacturing and lower emissions associated with production.
   - **Supplier Engagement**: Engage with laptop suppliers that have transparent sustainability practices, such as using recycled materials or renewable energy in manufacturing.
2. **Extend Laptop Lifespan and Minimize Replacement Cycles**
   - **Maintenance and Repairs**: Invest in maintenance and repairs to extend the lifespan of each device, minimizing the need for replacements and reducing emissions from manufacturing new laptops.
   - **Upgrade Instead of Replace**: Where possible, upgrade components (e.g., RAM or storage) rather than replacing entire laptops, which helps reduce emissions from production and transportation.
3. **Reduce Emissions During Use**
   - **Energy Management Settings**: Encourage employees to use power-saving modes, dim screens, and power down laptops when not in use to reduce electricity consumption.
   - **Encourage Efficient Use**: Educate employees on energy-conscious practices, such as disconnecting power when the battery is fully charged and avoiding high-performance modes when unnecessary.
4. **End-of-Life Disposal and Recycling**
   - **Environmentally Responsible Disposal**: Partner with certified e-waste recyclers to ensure laptops are disposed of in an environmentally friendly way, minimizing emissions from landfill waste and promoting materials recovery.
   - **Donation Programs**: Where possible, donate retired laptops to schools or non-profits, extending their useful life and reducing the demand for new equipment.
5. **Monitoring and Reporting**
   - **Annual Tracking and Reporting**: Track the carbon footprint of laptops annually, adjusting for any new purchases or updates to usage patterns. Report on reductions achieved and set annual targets to ensure alignment with the long-term net-zero goal.
   - **Lifecycle Emissions Review**: Periodically review lifecycle emissions data to account for any changes in suppliers or technology improvements that affect emissions.

Goals

- **1-5 Years**: Complete a full emissions baseline for laptops, implement energy-efficient settings, and increase employee awareness around responsible usage and disposal. Mindwire would be aiming for 5% annual reduction as attainable short terms goals while working towards larger reductions by 2030.

By actively managing our laptops' emissions across their lifecycle, we can meaningfully reduce Scope 3 emissions and progress toward our organization's sustainability commitments.

CANADIAN COMMITMENT

Our organization has committed to a net-zero emissions target for our Canadian operations. This target focuses on reducing emissions within the facilities, activities, and supply chains directly tied to our operations in Canada, where we have the greatest control and influence. By concentrating our efforts on emissions within the Canadian regulatory and energy landscape, we can make meaningful progress toward net-zero by 2050. This regional focus allows us to align our strategies with Canadian climate policies and ensure we are making the most impactful and achievable reductions within our scope.

NET ZERO TARGET

Our net-zero target covers all relevant emissions included in our GHG emissions inventory for Canadian operations, specifically addressing Scope 2 and Scope 3 emissions. Since our organization does not have Scope 1 emissions, our focus is on Scope 2 emissions from electricity and gas consumption within our leased premises, as well as Scope 3 emissions associated with the lifecycle of

our office laptops. By targeting reductions across these scopes, we are committed to minimizing our operational carbon footprint and progressing toward a net-zero emissions future by 2050.

CONCLUSION

In conclusion, our organization is dedicated to achieving net-zero emissions for our Canadian operations by 2050. With a comprehensive approach that addresses Scope 2 and Scope 3 emissions, we are actively implementing strategies to reduce our carbon footprint, focusing on efficient energy use, responsible equipment management, and sustainable procurement practices. Although we lease our premises, we are committed to collaborating with building management to make improvements and exploring renewable energy options. Through careful tracking, reporting, and annual reviews, we ensure accountability and transparency as we progress toward our goals. By taking these focused steps, we are making meaningful contributions to a sustainable future and are proud to be part of the global effort to address climate change.

Contact

Net Zero is a sustained collaborative effort. Feel free to reach out to us at HR@mindwire.ca

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