
Northern Micro

Towards Sustainability

Our Visions and Values

Corporate Responsibility Report

Property of: Northern Micro Inc.

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(GRI) Index

1. Strategy and Analysis	Information Links
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1.1 Statement from the most senior decision-maker of the organization (e.g., CEO, chair, or equivalent senior position) about the relevance of sustainability to the organization and its strategy.	Statement from Northern Micro's President
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2. Organizational Profile	Information Links
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2.1	Name of the organization.	Northern Micro Inc.
2.2	Primary brands, products, and/or services.	Primary Brands, Products
2.3	Operational structure of the organization, including main divisions, operating companies, subsidiaries, and joint ventures.	Operational Structure
2.4	Location of the organization's headquarters.	Northern Micro's corporate office is located in Ottawa, Ontario, Canada
2.5	Number of countries where the organization operates, and names of countries with either major operations or that are specifically relevant to the sustainability issues covered in the report.	Countries of Operation Canada
2.6	Nature of ownership and legal form.	Northern Micro Inc. is a privately owned company
2.7	Markets served (including geographic breakdown, sectors served, and types of customers/beneficiaries).	Markets Served
2.8	Scale of reporting organization, including: - Number of employees; - Net sales (for private sector organizations) or net revenues (for public sector organizations); - Total capitalization broken down in terms of debt and equity (for private sector organizations); and - Quantity of products or services provided.	Northern Micro Reports this information to persons with Financial interests in the company.
2.9	Significant changes during the reporting period regarding its size, structure, or ownership including: - The location of, or changes in operations, including facility openings, closings, and expansions; and - Changes in the share capital structure and other capital formation, maintenance, and alteration operations (for private sector organizations).	Nothing to Report
2.10	Awards received in the reporting period.	Awards Received No awards to Report

Environmental	
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Environmental: Disclosure on Management Approach	Information Links
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EN	<p>DISCLOSURE ON MANAGEMENT APPROACH Provide a concise disclosure on the Management Approach items outlined below with reference to the following Environmental Aspects:</p> <ul style="list-style-type: none"> • Materials; • Energy; • Water; • Biodiversity; 	Environmental Disclosure on Management Approach
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- Emissions, Effluents, and Waste;
- Products and Services;
- Compliance;
- Transport; and
- Overall.

Environmental Performance Indicators		
Aspect: Materials		Information Links
EN1	Materials used by weight or volume. See Indicator Protocol for guidance on calculation.	Materials Used
EN2	Percentage of materials used that are recycled input materials	Use of Recycled Input
Aspect: Energy		Information Links
EN3	Direct energy consumption by primary energy source.	Direct Energy Use
EN4	Indirect energy consumption by primary source.	Indirect Energy Use
EN5	Energy saved due to conservation and efficiency improvements.	Energy Saved
EN6	Initiatives to provide energy-efficient or renewable energy-based products and services, and reductions in energy requirements as a result of these initiatives.	Product Energy Saved
EN7	Initiatives to reduce indirect energy consumption and reductions achieved.	Reduce Indirect Energy
Aspect: Water		Information Links
EN8	Total water withdrawal by source.	All of Northern Micro's water consumption is municipal water. Northern Micro has therefore not established a metric for water withdrawal by source.
EN9	Water sources significantly affected by withdrawal of water.	All of Northern Micro's water consumption is municipal water. Northern Micro has therefore not established a metric for water withdrawal by source.
EN10	Percentage and total volume of water recycled and reused.	All of Northern Micro's water consumption is municipal water. Northern Micro does not have a means to reuse water. Water used at Northern Micro is not used within any manufacturing process.
Aspect: Biodiversity		Information Links
EN11	Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.	Northern Micro's Facility is not located in or near areas of high biodiversity value.
EN12	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas.	Northern Micro's operations and products do not have a significant impact on biodiversity.



EN13 Habitats protected or restored.	Northern Micro's operations do not have an adverse impact on biodiversity.
EN14 Strategies, current actions, and future plans for managing impacts on biodiversity.	Northern Micro's operations do not have an adverse impact on biodiversity.
EN15 Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk.	There are no species with habitats in the area. Northern Micro's operations do not have an adverse impact on biodiversity.

Aspect: Emissions, Effluents, and Waste	Information Links
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EN16 Total direct and indirect greenhouse gas emissions by weight.	Direct, Indirect Greenhouse Gas
EN17 Other relevant indirect greenhouse gas emissions by weight.	Northern Micro does not currently track any other indirect emissions.
EN18 Initiatives to reduce greenhouse gas emissions and reductions achieved.	Greenhouse Gas Reductions
EN19 Emissions of ozone-depleting substances by weight.	Ozone-Depleting Emissions
EN20 NOx, SOx, and other significant air emissions by type and weight.	None
EN21 Total water discharge by quality and destination.	Northern Micro does not have any waste water that is a result of any of their business production or business processes.
EN22 Total weight of waste by type and disposal method.	Responsible Operation
EN23 Total number and volume of significant spills.	None. Northern Micro does not produce any hazardous waste products or by products.
EN24 Weight (in kilograms or metric tonnes) of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III, and VIII, and percentage of transported waste shipped internationally.	None. Northern Micro does not produce any hazardous waste products or by products.
EN25 Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the reporting organization's discharges of water and runoff.	All of Northern Micro's water consumption is municipal water. Northern Micro has therefore not established a metric for water withdrawal by source. Northern Micro does not have any waste water as a result of their business production or business processes.

Aspect: Products and Services	Information Links
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EN26 Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation.	Product Stewardship
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EN27	Percentage of products sold and their packaging materials that are reclaimed by category.	Sold Products Packaging Reclaimed
Aspect: Compliance		Information Links
EN28	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations.	None
Aspect: Transport		Information Links
EN29	Significant environmental impacts of transporting products and other goods and materials used for the organization's operations, and transporting members of the workforce.	Transport Impact
Aspect: Overall		Information Links
EN30	Total environmental protection expenditures and investments by type.	Environmental Protection Expenditures



Northern Micro Corporate Environmental Policy and Philosophy

Northern Micro is dedicated to providing computer products and services that meet or exceed the quality, operational performance and life cycle cost requirements of our customers.

At Northern Micro we strive for continuous improvement of our environmental system by incorporating the best possible practices through our waste management and IT products recycling initiatives.

We understand that the achievement of reducing the amount of pollution and waste into our natural environment must rely, to a large extent, on each individual member of the corporate team. All employees, with the full support of management, must personally contribute to the goal of reducing, reusing and recycling our products and the waste we produce.

Northern Micro is committed to continually reducing the amount of Pollution created in its manufacturing plant by offering recycling solutions for IT equipment and by properly reducing, reusing and recycling its packaging material. Northern Micro maintains an Environmental Management system that it is proud of and one that complies with all of its legal and other defined environmental requirements.

By promoting this statement throughout the company, Northern Micro ensures the cooperation of all departments involved throughout the warehousing servicing and manufacturing areas in the company. Documented procedures are used as a guide in maintaining this control.

Herman Yeh
President
Northern Micro Inc.

Primary Brands, Services

GRI 2.2

Northern Micro is a Canadian privately owned company serving the needs of customers requiring computing solutions and hardware.

Northern Micro is committed to delivering the ultimate customer satisfaction by providing Reliable, Innovative and Flexible computing solutions and by continuously improving our product and service offerings.

The Environmental Management System assures that NM computer products, their manufacturing, their delivery, and their recycling are processed under the control of this system. The System is designed to adhere to ISO 14001:2015 standard. The system assures conformance to legal and the company's environmental policy and provides objective evidence of effective control.

Operational Structure

The organizational structure of those functions, which may impact on the EMS, is described in the attached organizational chart. Each major function of the organization is positioned so as to allow the effective implementation of the Environmental Management System. The Management Representative has the necessary authority to resolve environmental issues and the organizational freedom of reporting directly to the President, so as to alleviate conflicts with other considerations.

Northern Micro Inc. Management

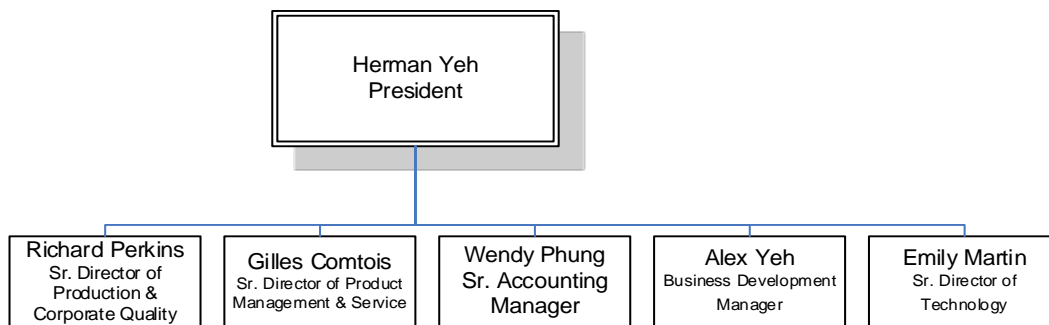


Figure 1 - NM Management Team



Responsibility and Authority

The environmental system is the responsibility of each employee of Northern Micro. The following are specific quality-related responsibilities of Northern Micro as they relate to the organization chart.

President

Oversees all company operations. Co-ordinates Management staff to attain company goals. Oversees the reviews of Corrective and Preventive actions with the Management Representative at Management meetings to ensure effective actions and follow-up are completed. Acts as the ultimate authority in the event of dispute in Environmental issues. Ensures that appropriate resources are available to all departments to complete corporate functions, including the ability of departments to hire or train personnel for all activities, including performance of work, verification of activities, and internal quality audits.

Senior Accounting Manager

Oversees financial operations at Northern Micro. Co-ordinates financial staff to close company books accurately. Provides accurate and timely financial information to assist the President in making corporate decisions.

Senior Director Production & Corporate Quality (Management Representative)

Oversees Quality Management System and Production operations. Verifies the implementation and follow-up of solutions. Schedules internal audits and provides reporting and follow-up to the management team as a basis for improvement of the Quality and Environmental Management System.

Senior Director Product Management

Oversees purchasing activities. Ensures purchases are made in accordance with ISO 14001:2015 guidelines and Northern Micro



Environmental Management System Procedures, and that suppliers are evaluated.

Service Manager

Handles service operations in accordance with ISO 14001:2015 guidelines and Northern Micro Quality and Environmental Management System Procedures. Oversees activities of the Customer Support Group. Develops and authorizes procedures for Technical Services and Support.

Markets Served

GRI 2.7

Northern Micro is a Canadian company, serving the needs of customers across Canada. Northern Micro takes pride in being able to tailor its solutions to a wide variety of their customers in the Federal Government, Various School Boards and Private companies (small and Medium Business) Canada wide.

Disclosure on Management Approach

ENVIRONMENTAL POLICY of NORTHERN MICRO INC.

Northern Micro is committed to continually reducing the amount of Pollution created in its manufacturing plant by offering recycling solutions for IT equipment and by properly reducing, reusing and recycling its packaging material. Northern Micro maintains an Environmental Management system that it is proud of and one that complies with all of its legal and other defined environmental requirements.

President

8 Apr 2016

Planning

Northern Micro has an Environmental Plan that consists of the Environmental Objectives, Environmental Manual and the Northern Micro Environmental Management System procedures. By following the Environmental Manual and the Environmental Management

System procedures, and by striving to meet the Environmental Objectives, Northern Micro is able to comply with the requirements of the ISO 14001:2015 specifications. If it becomes necessary to implement any procedures or policies that are not currently in Northern Micro's Environmental Plan, then a Plan using the guidelines for planning as per the ISO 14001:2015 guidelines shall be used.

Management Representative

The President has appointed Director of Production as the Management Representative for the Environmental Management System. The Director of Production has defined authority and responsibility for ensuring that the Northern Micro Environmental Management System complies with the requirements of ISO 14001:2015, and that the Environmental Management System is maintained, effective and continually improved.

These responsibilities are carried out through periodic Management System audits, and by completing the appropriate corrective actions. Additional responsibilities include:

- Ensuring the efficiency of the Environmental Management System is continuously improved
- Training Northern Micro personnel in regard to the EMS.
- Maintaining registration to ISO through internal and external audits, and monitoring corrective actions resulting from those audits to ensure they are eventually closed out and effective.

Internal Communication

Northern Micro Management ensures that there is a communication process in place regarding the effectiveness of the environmental management system. This is done in many ways, including the Northern Micro Intranet, email and verbally. Northern Micro does not communicate externally about its environmental aspects.

Management Review

Each Process of the Environmental Management System shall be reviewed annually, as a minimum, to assess and demonstrate the effectiveness of the system.

If necessary, additional reviews may be held. The Director, Production & Corporate Quality shall schedule and conduct review of the Environmental Management System with the NM management team in attendance. The following topics are available for address during

these review meetings to help ensure compliance with the ISO 14001:2015 standard:

- Environmental policy
- Environmental Objectives
- Results from internal and external audits, and the effectiveness of their corrective and preventive actions
- Improvements to the Environmental Management System
- Follow up of previous environmental reviews.
- Changes that could affect the environmental management system.
- Communications from external interested parties, including complaints

The Director of Production is responsible for maintaining the meeting notes from Management reviews, and any decisions or agreed-upon actions captured during reviews.

The management reviews will produce decisions and actions related to:

- Improvements of the effectiveness of the Environmental Management System and its processes
- Possible changes in the environmental policy or objectives

Resource Management

Northern Micro Management is committed to having a trained and effective team in order to implement and maintain the environmental management system and continually improve its effectiveness. Managers are responsible for determining training needs of their personnel, based on their qualifications, education, and the qualification requirements of individual employment positions as Management determines them for future needs fulfillment

Operational Control

Northern Micro plans those operations that are associated with the identified environmental aspects consistent with its environmental policy, objectives and targets. The details of this plan are documented in the Operational Control Procedure.

Emergency Preparedness and Response

Northern Micro does not produce a product where the product itself or any byproduct is harmful or poses any risk to any employees or the environment.

DETERMINING SIGNIFICANT ENVIRONMENTAL ASPECTS

Northern Micro's Management team has constructed a list of environmental aspects. This list will be a controlled document called the Environmental Aspects list. It will contain all aspects that were considered and ones that were considered to be significant.

Once the list of Environmental Aspects is created the management team will meet to unanimously decide which ones are significant for Northern Micro. The Environmental Aspects list will be updated to reflect the significant aspects.

Northern Micro's Management team will meet annually to review the Environmental Aspects list to ensure that it is still current.

GENERAL

Planning of product realization ensures that all quality objectives, environmental objectives and requirements of the product are outlined



and available as reference to produce a product that satisfies both customer and corporate requirements. All motherboards used in the designing of Northern Micro NMSO systems are RoHS certified by the component manufacturer verifying that compliance has been met to the above standard.

Northern Micro’s planning of product realization aims to reduce the amount of purchased packaging used to ship its computer systems to clients. Northern Micro strives to reduce the amount of purchased system packaging material by providing customers with the option of allowing Northern Micro to ship using reusable original packaging.

Northern Micro provides its customers the option of returning IT equipment for recycling and proper disposal. Northern Micro will provide this service through the web and will pick up from the customers site and will then properly dispose of the equipment for a fee.

The following Table includes Environmental Aspects that were taken into consideration over the last reporting period.

No.	Area	Aspect	Impacts	Rationale	Severity	Probability	Potential for Increased control	Total Score	Is it Significant?
1	Operations (design, manufacturing, packaging and distribution use and end of life)	Reduce the use of new packaging material whenever we can re-use packing (cardboard boxes, system bags, foams chips, etc)	Less waste being put into landfills.	This is one area of our process that we have significant control over. One of our Objectives deals with the reduction and reuse of packaging materials.	1	5	5	11	Yes
2	Operations (design, manufacturing, packaging and distribution use and end of life)	Offer to customers a proper solution to dispose of their obsolete IT equipment	Divert toxic materials in computer products from landfills and potential environment leakage. Also reuses natural resources already extracted at least once.	This is one area of our process that we have significant control over. Our EMS addresses recycling of our product and other company's product to minimize the environmental impact.	2	5	5	12	Yes



3	Operations (design, manufacturing, packaging and distribution use and end of life)	Maximize floor space efficiency to use less power/electricity	Less energy used in our production means less impact on environment from energy production and transmission.	We excluded this because our design of our new facility already took this into consideration when we design the space in 2005.	2	3	3	8	No
4	Operations (design, manufacturing, packaging and distribution use and end of life)	Review manufacturing process to minimize energy consumption. New burn-in procedure powers down equipment after testing instead equipment running throughout non working hours	Less energy used in our production means less impact on environment from energy production and transmission.	New imaging process decreases imaging time from 10 minutes to 3 minutes x 10,000 units annually	2	3	3	8	No
5	Operations (design, manufacturing, packaging and distribution use and end of life)	Order/deliver in bulk whenever possible.	We have less shipments to and from our facility by have products delivered in bulk which decreases the amount of fuel expended during delivery by minimizing the about and trips and the volume of the product being delivered.	We have been doing this for many years and will continue to do so. Impact is minimal based on current operating model.	1	5	5	11	Yes
6	Operations (design, manufacturing, packaging and distribution use and end of life)	Disposal of packaging products (Shrink wrap nylon strapping)	Materials going to the landfill.	New recycling partner, Cascades recovery diverting the majority of our garbage to recycling. Diversion report is provided via email.	2	5	5	12	Yes

7	Operations (design, manufacturing, packaging and distribution use and end of life)	Disposal of non-recyclable cardboard (motherboard boxes) and polystyrene (OEM packaging)	Materials going to the landfill.	Using cascade recovery has taken care of these types of boxing. Investigating possible polystyrene solution.	1	5	5	11	Yes
8	Operations (design, manufacturing, packaging and distribution use and end of life)	Reduce cooling loss in production area by installing doors/plastic windows	Less energy used in our production means less impact on environment from energy production and transmission.	We have isolated the warehouse from the production area to minimize loss of cool air in the summer to reduce the energy used in cooling the building.	1	3	3	7	No
9	Operations (design, manufacturing, packaging and distribution use and end of life)	Company vehicle emissions (Gas vs. Diesel)	Emissions from operations of motor vehicles with internal combustion engines.	All of our vehicles are tested annually for the Drive Clean program for the renewal of the licenses. We are in compliance with provincial regulations.	1	3	3	7	No
10	Operations (design, manufacturing, packaging and distribution use and end of life)	Product Development	Recycling impact	We design product to meet specific customer requirements and all of our motherboards in our products are RoHS compliant Part of our Epeat gold certification	2	3	3	8	Yes
11	Operations (design, manufacturing, packaging and distribution use and end of life)	Re-use/recycle pallets	Materials going to the landfill.	We recycle (sell) all unneeded pallets to a third party that reuses the pallets.	1	5	5	11	Yes

12	Operations (design, manufacturing, packaging and distribution use and end of life)	Bulk software kits 10 lits per 1000 systems	Materials going to the landfill	We no longer ship software kits to our customers unless the client has a specific requirement for them.	1	3	5	9	No
13	Environmental aspects (emissions)	Waste water disposal	Pollution of the environment	Our manufacturing process does not have any waste water. Our water emissions are from personal use and are treated at the municipal waste water facility. We have our property tied into separate storm and waste water systems.	1	1	1	3	No
14	Environmental aspects (emissions)	Electricity – lights off at nights, No AC in Warehouse	Less energy used in our facility means less impact on environment from energy production and transmission.	Implemented a induction lighting system in our warehouse and also changed circuits to leave one rather than 12 lights on during off hours for the security cameras.	1	3	5	9	No
15	Environmental aspects (emissions)	Systems/Monitors go into “sleep state” (turn on green features on the company’s PCs).	Less energy used in our facility means less impact on environment from energy production and transmission.	PAR 241	1	3	5	9	No
16	Environmental aspects (emissions)	Heating costs and use of thermostats	Less energy used in our facility means less impact on environment from energy production and transmission.	We have zoned thermostats to have better control over the HVAC system to minimize energy usage.	1	3	3	7	No

17	Environmental aspects (emissions)	Duplex printing	Reduce the materials being delivered to the office and leaving to go into the landfill	PAR 242	1	4	4	9	No
18	Environmental aspects (emissions)	Develop a paperless office program	Reduce the materials being delivered to the office and leaving to go into the landfill	Managers will meet to discuss what changes we can make to use “less paper” this year. This was not completed and needs to be addressed by management.	1	3	5	9	No
19	Environmental aspects (emissions)	Recycle tin, glass, newspapers and paper (Blue Box and shredding of sensitive documents)	Reduce the materials being delivered to the office and leaving to go into the landfill	We have included it and it is working well.	1	5	5	11	Yes
20	Environmental aspects (emissions)	Energy Star kitchen appliances	Less energy used in our facility means less impact on environment from energy production and transmission.	Ongoing.	1	3	3	7	No
21	Areas of Influence (Contractors and suppliers)	Janitorial services and products used by the contractor	Use of chemicals that are being discharged into the water system	Our janitorial service provider uses bio degradable products in our facility for cleaning.	3	3	3	9	No
22	Areas of Influence (Contractors and suppliers)	Building and HVAC maintenance and emissions. Evaluation of Colonnade Development to properly handle our HVAC system upkeep and maintenance.	Emissions of substances from the HVAC system into the environment. And proper disposal of refrigerants.	The HVAC system is currently being maintained by factory certified Trane technicians.	2	3	3	8	No
23	Areas of Influence (Contractors and suppliers)	Lawn care	Runoff into the drainage ditch that borders the property and storm system that impacts	The use of lawn care products is used according to the municipal by-laws currently in effect.	2	3	3	8	No



			the water downstream.						
24	Emergency Situation and abnormal operations	Area - neighbor's	Potential impact on operating effectiveness.	Fire at fiberglass plant this year, it has been closed after 4 th fire in 14 months.	2	3	1	6	No

Product Stewardship

Northern Micro takes responsibility for minimizing the environmental impacts of the products that we sell and support while they are in use and at the point where our clients require decommissioning them. We have many initiatives directed to the proper disposal of hardware.

We understand that the achievement of reducing the amount of pollution and waste into our natural environment must rely, to a large extent, on each individual member of the corporate team. As such, all employees, with the full support of management, contribute to the goal of reducing, reusing and recycling our products and the waste we produce.

In this regard, Northern Micro also works with committed partners that exhibit a focus on Sustainable Development and Green procurement.

Find out more about how Northern Micro’s commitments and green programs on our website.

Sold Product Packaging Programs

On top of recycling the product that we sell, Northern Micro also offers packaging take back programs for the products that we manufacture.

Before increasing the amount of unnecessary packaging shipped to a customer, Northern Micro offers a bulk packaging program where we will bulk ship Northern Micro computers to our clients with 100 % corrugated packaging. The result of using this packaging is more than 60% less waste in discarded packaging. We do this by offering



consolidated packaging that fits up to 30 computer systems into one bulk pack instead of individually packing each machine which produces a lot of unnecessary waste for some of our customers.

Northern Micro has an environmental objective to ship at least 40% of our systems in this manner when it is feasible to our customers to receive it that way. We are pleased to announce that we have successfully met that target in FY 2016.

Material Used

GRI EN 1

Northern Micro's purchases are typically a finished good, high level subassemblies, or services. Therefore, specific measures of weights are not universally available or part of our measurements.

Use of Recycled Input

GRI EN2

Northern Micro has achieved its objective to bring the usage of new material for packaging new computers to 60% of the total number of computers sold.

Northern Micro's planning of product realization aims to reduce the amount of purchased packaging used to ship its computer systems to clients. Northern Micro strives to reduce the amount of purchased system packaging material by providing customers with the option of allowing Northern Micro to ship using reusable original packaging.

Northern Micro provides its customers the option of returning IT equipment for recycling and proper disposal. Northern Micro will provide this service through the web and will pick up from the customers site and will then properly dispose of the equipment.

Emissions



Northern Micro's operations do not release significant quantities or greenhouse gases (GHG), so the company's greatest potential impact is an indirect one, through the release of CO₂ by the utility companies providing the electricity used. This has helped drive Northern Micro's focus on energy conservation. Our energy conservation efforts have benefitted both the environment and our bottom line. Northern Micro is committed to the conservation of energy and through this commitment is also committed to the reduction of GHG caused by Gas and Electricity consumption.

Total direct and indirect greenhouse gas emissions by weight

FY2007	Gas Consumption Cubic Meters	Electricity kWh
	19885	406,387
KG CO ₂ /unit	0.43	0.19
Total KG CO₂	8550.55	77213.53
FY2008	Gas Consumption Cubic Meters	Electricity kWh
	16013	417,100
KG CO ₂ /unit	0.43	0.19
Total KG CO₂	6885.59	79249
FY2009	Gas Consumption Cubic Meters	Electricity kWh
	18618	414,000
KG CO ₂ /unit	0.43	0.19
Total KG CO₂	8005.74	78660
FY2010	Gas Consumption Cubic Meters	Electricity kWh
	15088	410,411
KG CO ₂ /unit	0.4469	0.19
	6,742.83	77,978.09



Total KG CO2		
FY2011	Gas Consumption Cubic Meters	Electricity kWh
	21089	397383
KG CO2/unit	0.4469	0.19
Total KG CO2	9424.67	75502.77
FY 2012	Gas Consumption Cubic Meters	Electricity kWh
	20097	372744
KG CO2/unit	0.4469	0.19
Total KG CO2	8981.35	70821.36
FY 2013	Gas Consumption Cubic Meters	Electricity kWh
	24625	376120
KG CO2/unit	0.4469	0.19
Total KG CO2	11004.91	71462.8
FY 2013	Gas Consumption Cubic Meters	Electricity kWh
	24550	367952
KG CO2/unit	0.4469	0.19
Total KG CO2	11004.91	71462.8



FY 2016	Gas Consumption Cubic Meters	Electricity kWh
	8520	391283
KG CO2/unit	0.4469	0.19
Total KG CO2	3807.588	74343.77

Ozone-Depleting Emissions

Northern Micro has no ozone-depleting substances that are part of their manufacturing or business processes. We therefore have no routine emissions of these ozone-depleting substances. The only potential emissions of ODSs may be the leakage from refrigeration equipment that is inherent in their operation.

Waste By Type and Disposal Method

The following Table represents the amount of waste recycled at Northern Micro. The electronics component is a result of our hardware take back program where customers may return decommissioned product for proper recycled disposal.

Total weight of waste by type and disposal method

2006	Hazardous	Non-Hazardous	Total
Recycling Cardboard		16000	
Recycling Electronics		570	
Landfill		9600	
2006 Total			26170



2007		Hazardous	Non-Hazardous	Total
Recycling Cardboard			16500	
Recycling Electronics			2775	
Landfill			10500	
2007 Total				29775

2008		Hazardous	Non-Hazardous	Total
Recycling Cardboard			15000	
Recycling Electronics			1800	
Landfill			9200	
2008 Total				26000

2009		Hazardous	Non-Hazardous	Total	
Recycling Cardboard			17250		200 lbs/lift
Recycling Electronics			1950		
Landfill			11500		150 lbs/lift
2009 Total				30700	

2010		Hazardous	Non-Hazardous	Total
Recycling Cardboard			16000	
Recycling Electronics			1200	
Landfill			9700	
2010 total				26900
2011		Hazardous	Non-Hazardous	Total

Recycling Cardboard			12000	
Recycling Electronics			1200	
Landfill			4000	
2011 total				17200
2012		Hazardous	Non- Hazardous	Total
Recycling Cardboard			8928	
Recycling Metal			1000	
Recycling Electronics			2000	
Landfill			1200	
2012 total				17200



Database: Ottawa Transportation
Date: 1/1/2014 to 3/31/2014
Customer: 1434 to 1434
Site: 1
Quantity: Billing Quantity

Customer Number: 1434

Northern Micro, 3155 Swansea Cres, Ottawa, ON K1G3J3

Site Number: 1

Northern Micro, 3155 Swansea Cres Ottawa ON K1G3J3

Month	02	11	73	76	96	AQ	F4	Total
	Mixed Paper	Corrugated	Shredded OPF	Mixed OPF	Mixed Plastic	Mixed Contain	Secure Console	
Jan 14	0.24	0.80	0.00	0.00	0.09	0.02	0.00	1.15
Feb 14	0.26	3.19	0.10	0.13	0.35	0.00	4.00	8.03
Mar 14	0.27	2.53	0.08	0.09	0.86	0.01	2.00	5.84
Total	0.77	6.52	0.18	0.22	1.30	0.03	6.00	15.02

02	Mixed Paper	5.13%
11	Corrugated Containers	43.41%
73	Shredded OPF	1.20%
76	Mixed OPF	1.46%
96	Mixed Plastic	8.66%
AQ	Mixed Containers	0.20%
F4	Secure Consoles	39.95%



Database: Ottawa Transportation
Date: 10/1/2013 to 12/31/2013
Customer: 1434 to 1434
Site: 1
Quantity: Billing Quantity

Customer Number: 1434

Northern Micro, 3155 Swansea Cres, Ottawa, ON K1G3J3

Site Number: 1

Northern Micro, 3155 Swansea Cres Ottawa ON K1G3J3

Month	02	11	73	76	95	96	AQ	F1	F4	Total
	Mixed Paper	Corrugated	Shredded OPF	Mixed OPF	Shrink Wrap	Mixed Plastic	Mixed Contain	Secure Caddies	Secure Console	
Oct 13	0.11	0.35	0.05	0.06	0.04	0.09	0.00	1.00	0.00	1.70
Nov 13	0.09	0.49	0.15	0.05	0.00	0.07	0.01	2.00	0.00	2.86
Dec 13	0.12	0.62	0.17	0.03	0.05	0.04	0.02	0.00	2.00	3.05
Total	0.32	1.46	0.37	0.14	0.09	0.20	0.03	3.00	2.00	7.61

02	Mixed Paper	4.20%
11	Corrugated Containers	19.19%
73	Shredded OPF	4.86%
76	Mixed OPF	1.84%
95	Shrink Wrap	1.18%
96	Mixed Plastic	2.63%
AQ	Mixed Containers	0.39%
F1	Secure Caddies	39.42%
F4	Secure Consoles	26.28%



Cascades Recovery Inc.

Customer Material Weight Summary in MT

Database: Ottawa Transportation
Date: 10/1/2015 to 12/31/2015
Customer: 1434 to 1434
Site: 1 To 9999999
Quantity: Billing Quantity

Customer Number: 1434
 Northern Micro, 3155 Swansea Cres, Ottawa, ON K1G3J3
Site Number: 1
 Northern Micro, 3155 Swansea Cres Ottawa ON K1G3J3

Month	02	11	73	76	95	96	AQ	F1	F4	Total
	Mixed Paper	Corrugated	Shredded OPF	Mixed OPF	Shrink Wrap	Mixed Plastic	Mixed Contain	Secure Caddies	Secure Console	
Oct 15	0.09	0.82	0.03	0.01	0.03	0.16	0.00	0.00	2.00	3.14
Nov 15	1.53	0.29	0.04	0.00	0.04	0.08	0.00	0.00	0.00	1.98
Dec 15	0.04	2.10	0.03	0.15	0.04	0.11	0.01	2.00	1.00	5.48
Total	1.66	3.21	0.10	0.16	0.11	0.35	0.01	2.00	3.00	10.60

02 Mixed Paper 15.66%
 11 Corrugated Containers 30.28%
 73 Shredded OPF 0.94%
 76 Mixed OPF 1.51%
 95 Shrink Wrap 1.04%
 96 Mixed Plastic 3.30%
 AQ Mixed Containers 0.09%
 F1 Secure Caddies 18.87%
 F4 Secure Consoles 28.30%

Cascades Recovery Inc.

Northern Micro Inc., Ottawa, ON
 June 2013 Waste Diversion Report



2013																			
Month	OCC	OPMP	CGAMP	MP	Skids	Misc										Recovered - 2013	Landfilled - 2013	Total	Diversion
Jan-13	0.69	0.60	0.06	0.09												1.44		1.44	100%
Feb-13	1.22	0.53		0.29												2.05		2.05	100%
Mar-13	2.62	1.09	0.09	0.71												4.45		4.45	100%
Apr-13	0.35	0.15		0.04												0.54		0.54	100%
May-13	0.35	0.29	0.02	0.19												0.86		0.86	100%
Jun-13	1.04	0.11	0.01	0.04												1.20		1.20	100%
Jul-13																			
Aug-13																			
Sep-13																			
Oct-13																			
Nov-13																			
Dec-13																			
Total	6.28	2.71	0.18	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.54	0.00	10.54	
Average	1.05	0.45	0.03	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.76	0.00	1.76	100.0%
Note:																			
2012																			
Month	OCC	OPMP	CGAMP	MP	Skids	Misc										Recovered - 2012	Landfilled - 2012	Total	Diversion
Jan-12	0.23	0.20	0.04	0.07		0.04										0.58		0.58	100%
Feb-12	0.51	0.43	0.04	0.22		0.04										1.24		1.24	100%
Mar-12	0.65	0.49		0.14		0.04										1.32		1.32	100%
Apr-12	0.10	0.02	0.01	0.06												0.19		0.19	100%
May-12	0.12	0.23	0.02	0.02												0.39		0.39	100%
Jun-12	0.11	0.22		0.03		0.04										0.40		0.40	100%
Jul-12	0.18	0.16		0.10		0.07										0.51		0.51	100%
Aug-12	0.21	0.03	0.01	0.04												0.39		0.39	100%
Sep-12	0.13	0.29	0.01	0.03		0.04										0.50		0.50	100%
Oct-12	0.14	0.09		0.03												0.26		0.26	100%
Nov-12		0.04														0.04		0.04	100%
Dec-12	0.11	0.22	0.02	0.05												0.40		0.40	100%
Total	2.59	2.42	0.15	0.79	0.00	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.21	0.00	6.21	
Average	0.24	0.20	0.02	0.07	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.52	100.0%
Legend																			
All weights provided in Metric Tonnage																			
OCC	Old Corrugated Containers																		
OPMP	Office & Mixed Paper																		
CGAMP	Cans, Glass & Mixed Plastics																		
MP	Mixed Plastics																		
Skids	Skids/Pallets																		
Misc	Miscellaneous Materials																		
	Recovered - Recovered																		
	Landfilled - 2) Landfill																		
	Total Total Recovered and Landfilled																		
	Diversion Diversion Ratio																		



Database: Ottawa Transportation
Date: 1/1/2015 to 3/31/2015
Customer: 1434 to 1434
Site: 1
Quantity: Billing Quantity

Customer Number: 1434

Northern Micro, 3155 Swansea Cres, Ottawa, ON K1G3J3

Site Number: 1

Northern Micro, 3155 Swansea Cres Ottawa ON K1G3J3

Month

	Mixed Paper		Corrugated		Shredded OPF		Mixed OPF		Shrink Wrap	Mixed Plastic		Total	
Jan 15		0.36		0.56		0.09		0.00		0.00		0.19	1.20
Feb 15		0.54		2.51		0.03		0.00		0.05		0.10	3.23
Mar 15		0.50		0.65		0.00		0.12		0.00		0.26	1.53
Total		1.40		3.72		0.12		0.12		0.05		0.55	5.96



Transportation

Transportation (CO2 Impact)

	Northern Micro owned vehicles	Third Party Delivery Vehicles
Month	(KGS CO2)	(KGS CO2)
FY2007		
August	2944	
September	3027	
October	3421	
November	2316	
December	2783	
January	2783	
February	2599	
March	2813	
April	3115	
May	2315	
June	2551	
July	1624	
Total FY 2007	32290	365351
FY2008		
August	2259	
September	2530	
October	1923	
November	2936	
December	1772	
January	1947	
February	2185	
March	1887	
April	1928	
May	3095	
June	2287	
July	1807	
Total FY 2008	26556	489204



	Northern Micro owned vehicles	Third Party Delivery Vehicles
Month	(KGS CO2)	(KGS CO2)
FY2009		
August	4,966.00	
September	14,972.00	
October	13,833.00	
November	12,388.00	
December	16,679.00	
January	6,525.00	
February	9,571.00	
March	9,714.00	
April	12,266.00	
May	5,004.00	
June	7,780.00	
July	11,400.00	
Total FY 2009	287725	428104

	Northern Micro owned vehicles	Third Party Delivery Vehicles
Month	(KGS CO2)	(KGS CO2)
FY 2010		
August	1,675.83	
September	5,007.55	
October	5,756.02	
November	5,389.59	
December	7,185.98	
January	5,223.74	
February	6,975.65	
March	6,740.21	
April	4,893.23	
May	6,653.44	
June	6,548.51	
July	9,327.80	



Petro-Canada Gas Cards	11,000.00		
Total Fuel	82,377.55		
Total L	70,020.92		
CO2 per L	<u>2.30</u>		
Total KG	<u>189,468</u>	389,121	
		Northern Micro owned vehicles	Third Party Vehicles
Month		(KGS CO2)	(KGS CO2)

FY 2011

August -336.36
 September 3722.58
 8118.56
 10231.81
 8809.53
 3776.51
 5231.84
 9771.15
 6553.5
 6582.41
 4695.8
 10480.35

 77637.68

Total L 77637.68
 Total CO2/L 2.30

Total KG NM Vehicles 189,468

Total KG Trucking companies 274422

Total KG NM 189468+274422 = 463,890



FY12 Mileage

846.65	916.46
4,892.31	5,177.92
5,814.30	6,273.74
2,241.35	3,217.22
6,691.50	7,739.07
3,935.84	4,727.64
5,394.70	6,531.97
8,070.45	8,880.32
4,492.13	5,611.97
2,360.87	3,231.16
7,627.09	8,744.63
6,977.37	15,662.28

76,714.38

2.30

176,443

FY2012

Shipping costs - Account 5200	198,871.04	
Average price for 1 container	107	
Total number of skids	1,858.61	
Average number of skids per shipment	3.5	
Estimated number of skids shipments	531.03	
Average number of kilometers	400.00	
Total number of trucking kilometer to ship to NM		212,412
Average fuel economy KM/L	2.50	
Average number of liters of diesel consumed		84,965
CO2 per liter of diesel fuel	2.63	
Total KG of CO2 from trucking	223,458	

Total 2012 Northern Micro 176443 (NM Owned vehicles) + 212412 (Third party vehicles)

=Total annual 388855

FY2013 Mileage 54710.61



	2.30	
	125834.40	
		FY2013
Shipping costs - Account 5200		174821.85
Average price for 1 container		107.00
Total number of skids		1633.85
Average number of skids per shipment		3.50
Estimated number of skids shipments		466.81
Average number of kilometers		400.00
Total number of trucking kilometer to ship to NM		186725.61
Average fuel economy KM/L		2.50
Average number of liters of diesel consumed		74690.24
CO2 per liter of diesel fuel		2.63
Total KG of CO2 from trucking		196435.34
Total 2013 Northern Micro 125834 (NM Owned vehicles) + 196435.34 (Third party vehicles)		
Total 2013 annual 322269.34		
FY2014 Mileage	21977	
CO2/km	2.3	
Total	50547.1	
		FY2014
Shipping costs - Account 5200		75151
Average price for 1 container		107
Total number of skids		702
Average number of skids per shipment		3.5



Estimated number of skids shipments		201
Average number of kilometers		400
Total number of trucking kilometer to ship to NM		80268.091
Average fuel economy KM/L		2.5
Average number of liters of diesel consumed		200670.23
CO2 per liter of diesel fuel		2.63
Total KG of CO2 from trucking		804754
Total 2014 Northern Micro (NM Owned vehicles) + (Third party vehicles)	251217.3	
Yes		2016
FY2016 Mileage	82172.34	
CO2/km	2.3	
Total	188996	
Shipping costs - Account 5200		275357
Average price for 1 container		107
Total number of skids		2573
Average number of skids per shipment		3.5
Estimated number of skids shipments		735
Average number of kilometers		400
Total number of trucking kilometer to ship to NM		294106
Average fuel economy KM/L		2.5
Average number of liters of diesel consumed		735266



CO2 per liter of diesel fuel		2.63
Total KG of CO2 from trucking	279568.7	279569
Total 2016 Northern Micro (NM Owned vehicles) + (Third party vehicles)	468565	

Analysis of Data

Northern Micro collects and analyses appropriate data to demonstrate the suitability and effectiveness of the Environmental Management System and to evaluate where continual improvement can be made.

Continual Improvement

Northern Micro is committed to continually improving the effectiveness of the environmental management system through the use of the environmental policy and environmental objectives, analysis of data, audit results, corrective and preventive actions and the management review.

Northern Micro does not currently track savings resulting from its environmental policies and leadership. We estimate that over the past three years that we have had our initiatives in place, annual savings from its waste management and its focus on pollution prevention have exceeded environmental expenses by an average of three to one.