

Electronics Recycling in the NWT: Invitation for Feedback



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Introduction

The Department of Environment and Natural Resources (ENR) will be launching a territory-wide Electronics Recycling Program and would like your feedback on the proposed program. Your input will help ensure the program meets the needs of NWT residents, businesses supplying electronics in our communities, operators collecting and consolidating electronics, and community and municipal governments managing our waste.

We are encouraging feedback from NWT residents and stakeholders on the program, including the proposed product list and fees, community depot collection system, electronics collection events, and key stakeholder roles and responsibilities.

Please write, email or phone Giselle Beaudry with your comments by **February 16, 2015**.

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Part 1: Program Overview

1.1 What's the problem with electronic waste?

Disposing electronics in community landfills creates unwanted pollution and is a waste of valuable resources. Electronics can contain harmful materials such as brominated flame retardants and halogenated hydrocarbons as well as heavy metals such as cadmium, copper, mercury and lead. Electronics are designed so these materials remain contained within them. However, when disposed in landfills, burned or left on the land where they are exposed to rain, snow and wind, they may leach materials that are harmful to the environment and human health. Recycling electronics helps keep these pollutants out of our environment.

Electronics also contain valuable materials such as aluminum, copper, plastics, precious and rare metals, which can be recycled into new products. Recycling old electronics into new products minimizes environmental impacts related to extracting raw materials through mining and other activities.

ENR conducted a survey¹ in 2012 to better understand the size of the problem in the NWT. On average, households reported having 20 electronic items in their possession. While many respondents reported donating unwanted electronics, the number of respondents putting unwanted electronics in the garbage was twice the number of respondents taking them to NWT depots or drop-off centres.

Electronics recycling options for NWT residents are currently limited. In many communities, electronics are disposed at the landfill with regular garbage. Some local governments, such as those in Yellowknife, Hay River and Fort Smith, separate electronics at the landfill for recycling. However, in the last year and a half, costs for recycling NWT electronics in Alberta (the closest recycling facilities) have gone from being cost neutral to \$2,000 to \$8,000 a load². These cost increases create an extra financial burden on municipal and community governments trying to reduce electronic waste in their communities. The proposed program shifts the financial burden of electronics recycling from general taxpayers (municipal and community government budgets) to electronics users (who pay a fee upfront when they buy new electronics).

Other jurisdictions across Canada and around the world recognize the importance of electronics recycling. Regulated programs similar to the one proposed in this document are in place or under development in all Canadian provinces. New Brunswick is currently developing an electronics recycling program and all other provinces have programs in place. The Yukon Territory is also developing an electronics recycling program.

¹Available at:
http://icarenwt.ca/uploads/files/e-waste_survey_report_-_final_aug_2012.pdf
²Estimates based on transportation to Alberta costing over \$1,000 per load and recycling costing up to \$700/tonne of electronics.

1.2 How does the proposed program work?

The Government of the Northwest Territories (GNWT) is proposing a new regulation, under the *Waste Reduction and Recovery Act*, called the Electronics Recycling Regulation. This regulation will identify a list of electronic products that, when distributed in or into the NWT, will be subject to an environmental handling fee. The regulation will only apply to new electronics and will include online sales.

Fees will be collected in the GNWT's Environment Fund and be used to pay the full cost of the Electronics Recycling Program. Through these fees, the cost of electronics recycling will be shifted from general taxpayers (community and municipal government budgets) to electronics users.

Environmental handling fees paid on electronics will not include a refundable deposit so a refund will not be provided on electronics returned for recycling. There will be no charge to drop off electronics for recycling.

Two options will be available to NWT residents, businesses and organizations for recycling electronics. In the 10 largest NWT communities (with a current population of more than 750), electronics will be safely and responsibly collected at electronics recycling depots (see blue stars on the map next page). Where appropriate, existing bottle depots will be expanded to accept electronics so residents can conveniently bring their electronics and beverage containers to the same place. Electronics recycling depots will generally be more central and conveniently located for residents to visit than the local landfill.

In the remaining communities, one-day electronics collection events will be coordinated by ENR (see red circles on the map next page). Residents in these communities will be invited to bring their electronics to a central location during a one-day event. Collection events will be held in all communities during the first year of implementation and on an as needed basis in following years. At minimum, collection events will be held every two years. Communities will also be encouraged to use electronics recycling depots in neighbouring larger communities, if possible.

While the response rate for a 2008 survey conducted by ENR was small, the 88 residents who participated identified electronics recycling as one of the top three priorities for the territorial waste reduction and recovery program. Sixty-nine percent of respondents were willing to pay fees for electronics recycling.

Where opportunities exist, the transportation and consolidation network in place for beverage containers will also be used for electronics. Using a combined transportation network will increase efficiency and reduce costs. Electronics will be transported from communities and consolidated at beverage container processing centres in Inuvik, Hay River or Yellowknife. The electronics will be prepared for shipping at these facilities and sent to a registered electronics recycling facility in Alberta.

Community depots and processing centres will be required to meet standards relating to environmental and occupational health and safety. These standards will protect operators and staff, community members and the natural environment from potential dangers resulting from improper handling of electronics.

Protection of personal and private data stored in computers, phones and other devices will also be an important consideration. Users bringing electronics to community depots and collection events will be responsible for removing personal and private data. Depots, processing centres, transporters and recyclers will also be required to take measures to ensure electronics are stored securely.

Figure 1. Map of community electronics recycling depots and collection events

1.3 What types of electronics are included in the program?

Proposed electronic product categories and environmental handling fees for the NWT program are outlined in Table 1. Phase 1 product categories will be included in the program when it is launched. These products align with Alberta's current electronics recycling program.

One to two years after the launch of the program, the regulation will be revised to include Phase 2 products listed below. Phase 2 will generally include all other electronics included in recycling programs across the

country, including British Columbia, which currently has the most extensive electronics list in the country. Efforts will also be made to align the Phase 2 list with Alberta, once Alberta proceeds with the planned expansion of their program.

Cell phones and batteries are not currently proposed for inclusion in the regulated program. ENR is in discussions with the Canadian Wireless Telecommunications Association (CWTA) about expanding its voluntary Recycle My Cell³ program across the NWT. The program collects cell phones in boxes at retail and voluntary third-party locations and through a mail-back program. ENR is also talking to Call2Recycle⁴ about improving the presence of their voluntary industry funded battery recycling program in the NWT. This program can also be used for cell phone collection.

Table 1. Proposed electronic product categories and fees

Product Category	Specific Examples	Proposed NWT Environmental Handling Fee (\$)
Phase 1 (program launch)		
Desktop computers	computer processing units (CPUs), servers	10.50
Portable computers	laptops, tablets, notebook computers	3.00
Display devices less than 30"	computer monitors, TV screens, all-in-one computers	12.25
Display devices 30" to 45"	computer monitors, TV screens, all-in-one computers	24.50
Display devices greater than 45"	computer monitors, TV screens, all-in-one computers	40.00
Desktop printers and multifunction products	desktop printers, desktop multifunction devices	8.00
Floor standing printers and multifunction products	floor standing printers, floor standing multifunction devices	100.00
Uninterruptible power supply units (UPS)	unit that provides emergency power when the input power source fails	to be determined
Peripherals	computer mice and keyboards	none
Phase 2 (one to two years after program launch)		
Audio video	home theatres, stereo-in-a-box, stereo equipment, DVD/CD/VCR players, radios, game consoles, speakers, MP3/CD players, headphones, digital cameras	to be determined
Phones and answering machines	cord and cordless phones (cell phone excluded – see note below), answering machines	to be determined
Small appliances	microwaves, toasters, vacuums, blow-dryers, lighting	to be determined
Others (to be determined)	power tools, musical instruments, medical and monitoring equipment	to be determined

³ For more information visit: <http://www.recyclemycell.ca>

⁴ For more information visit: <http://www.call2recycle.ca>

1.4 Why is there a fee when I purchase new electronics?

No matter where you live in Canada, the value of the recyclable materials in electronics is generally less than the cost of collecting, sorting, dismantling, transporting and managing difficult materials such as lead containing glass from in old cathode ray tube TVs. All nine existing provincial electronics recycling programs in Canada charge fees on electronics.

The proposed NWT fees outlined in Table 1 were developed with many considerations in mind. The program has been designed to be financially self-sustaining. Fees on new electronics need to be high enough to cover the cost of running the recycling program, including paying NWT depot and processing centre operators to collect electronics, and paying to transport and recycle electronics.

Another consideration was minimizing impact on local electronic retailers by making sure the fees are not the highest in the country. This has been difficult in the NWT because of high transportation costs, low population density and high cost of living. NWT fees have been set so they are no higher than the top end of fees in existing Canadian programs. In other jurisdictions fees during the first year of a program are generally set high to cover start-up costs and reduced over time once programs are established. For example, while Alberta currently has the lowest fees in the country, it is the oldest program in the country and its year one fees were comparable to, and in some cases higher than, those proposed in the NWT.

Fees vary for different products. This reflects the specific costs of recycling each item, which vary depending on size and types of material found in them. Fees in other Canadian jurisdictions are intended to reflect the full cost of recycling specific products. Aligning proposed NWT fees with other jurisdictions helps reflect these product-specific costs.

1.5 What will happen to electronics collected under the program?

ENR will select an electronics recycler through a competitive bid. The NWT electronics recycler will be required to be registered under the Government of Alberta electronics recycling program. This will ensure important environmental standards and employee health and safety standards are met in Alberta facilities, and will make sure no electronics are sent to countries where minimum standards are not in place to protect the environment and employee health and safety.

Establishing an electronics recycling facility in the NWT may be an option in the future. ENR's first priority is to establish an NWT electronics collection system (i.e. community depots, collection events). Information on the quantity and type of electronics collected in the NWT during the first two years of the program will help determine if an NWT recycling facility is feasible and/or desirable. A key consideration is having measures in place to ensure the proper management of electronic components, which are potentially harmful to human health and the environment.

1.6 What about electronics not included in the program?

There is no fee for electronics not listed in Table 1 (page 6). These electronics will not be accepted at community depots and collection events for recycling. Managing this waste will remain the responsibility of community and municipal governments, and they can decide if they will collect non-program electronics for recycling. The NWT Electronics Recycling Program may expand in the future to include additional types of electronics and reduce this responsibility for community and municipal governments.

1.7 What are the timelines for the proposed program?

The Electronics Recycling Program is expected to be launched in Fall 2015. At that time, electronics suppliers would begin charging environmental handling fees and depots would begin accepting electronics for recycling. The regulation is expected to be finalized and approved in Spring 2015.



Part 2: Overview of Key Stakeholder Roles and Responsibilities

ENR is responsible for running the Electronics Recycling Program, but will rely on support from key partners to run an effective program. Below is an overview of roles and responsibilities for each of the following key stakeholders:

1. Electronics users
2. Electronics suppliers
3. NWT depots and processing centre operators
4. Community and municipal governments
5. Electronics recycler

2.1 Electronics Users

Electronics users range from individuals using electronics for personal use to governments, organizations, businesses, boards and agencies. All electronics users will be invited to bring electronics they no longer use to community depots and collection events for recycling. It will be the responsibility of the electronics user to ensure personal and private data is removed from electronics before it is brought to a community depot or collection event.

In some communities, businesses and organizations with large volumes of electronics will be asked to work with depot operators to coordinate large drop-offs. This may include determining timing and frequency of drop-offs to ensure appropriate personnel and storage is available.

2.2 Electronics Suppliers

The proposed Electronics Recycling Regulations will apply to all electronics suppliers providing designated electronics in or into the NWT, including electronics manufacturers, distributors, wholesalers and retailers. The regulation will not be limited to local suppliers, and will also apply to online suppliers and suppliers located outside the NWT who are selling into the NWT.

All electronics suppliers will be required to:

1. Register under the program.
2. Apply environmental handling fees on designated electronics and clearly identify these fees on customer receipts and in advertising.
3. Report regularly and remit fees to the Environment Fund as applicable (see additional information below).

At the start of the program all electronics suppliers will be required to report quarterly on the quantities of designated electronics sold in or into the NWT. Reporting from electronics suppliers outside the NWT will also include identifying their customers in the NWT. Reporting from electronics suppliers located in the NWT will include identifying their suppliers and customers.

Information in reports from suppliers will be used to ensure fees are only remitted to the Environment Fund once. When electronic products pass through more than one supplier before being sold to an end user, fees will ONLY be remitted to ENR at the first point of sale into the NWT. After the first point of sale, fees will be passed from supplier to buyer directly.

The reporting structure will be reviewed within the first two years of the program and consideration will be given to reducing reporting requirements of retailers in good standing, who are selling small volumes of electronics and sourcing electronics from suppliers already registered under the Electronics Recycling Program.

It is important to put measures in place to ensure all electronics suppliers (e.g. local retailers, national and international distributors) are compliant with the Electronics Recycling Regulation. This ensures a level playing field for all electronics suppliers. Suppliers failing to comply with the regulation will be guilty of an offence under the *Waste Reduction and Recovery Act*.

Activities to ensure compliance will focus on two key areas:

1. Ensure all companies supplying electronics in the NWT are registered under the program. Regular searches will be conducted to identify electronics suppliers not registered and appropriate action will be taken.
2. Ensure suppliers registered under the program are accurately reporting sales and remitting fees. Registered suppliers will participate in on-site reviews involving in-person visits and reviews of sales invoices and other relevant information. These reviews will be conducted for all registered companies, including those outside the NWT.

Retailers will be encouraged to display materials provided by ENR to explain the purpose of the program, describe how environmental handling fees work and encourage customers to recycle old electronics.

2.3 NWT Depot and Processing Centre Operators

As identified on the **map** (page 5), 10 communities will have electronics recycling depots. Where possible, beverage container depots in these communities will also serve as electronics recycling depots. The beverage container processing centres in Inuvik, Yellowknife and Hay River will also be used for consolidating and cross-docking electronics. Combining the beverage container and electronics programs will result in a more convenient program for residents and will reduce costs by improving efficiency. Bottle depot operators are an important stakeholder and encouraged to provide input on this proposal.

Bottle depots in Fort McPherson, Norman Wells, Fort Providence and Fort Smith are already collecting electronics as part of an electronics recycling pilot. It is intended that these depots will continue collecting electronics under the program. However, in Fort Providence, where the bottle depot is run by a school, a more thorough review is needed to determine if having students handling electronics is appropriate. Existing bottle depots in Tuktoyaktuk, Fort Simpson and Behchoko will start accepting electronics for recycling when the program is launched. These depots are operating under a five-year licence. If other individuals express interest in providing this service, they will be considered once the licence expires.

Depots in Inuvik, Yellowknife and Hay River are run by the same operators who run the beverage container processing centres. These depots and processing centres also operate under a five-year licence. New licences for these facilities, which service the largest communities and handle large volumes of materials from all communities, are issued through a competitive process.

Depot operators accepting electronics in these 10 communities will be paid in two ways:

- 1. Tonnage payments:** Depot operators will be paid \$300/tonne of electronics collected. For example, in a community of 900 it is expected two to four tonnes of electronics will be collected in a year. This would be equivalent to a payment of \$600 to \$1,200 per year. This rate is higher than rates paid by other Canadian electronics recycling programs (i.e. \$130 to \$200/tonne). It reflects lower volumes expected in smaller communities and higher labour costs in the north. This payment will be made once the electronics are received and weighed at a beverage container processing centre. This is expected to happen one to four times a year for most depots.
- 2. Monthly grant payments:** In addition to tonnage payments, depots accepting electronics will receive monthly grants. Grants will be larger for communities with a higher cost of living and for smaller communities to reflect lower tonnages expected. Grants will range from about \$1,000 to \$2,500 per year (\$80 to \$210 per month). Depots in Yellowknife, Hay River and Inuvik will not receive grants as they are expected to collect higher tonnages of electronics and are being paid for consolidating electronics.

Electronics collected at community depots will be transported in loads mixed with beverage containers to beverage container processing centres in Yellowknife, Hay River and Inuvik. These centres will not actually process electronics, but will simply store them until there are enough to send full loads to Alberta for recycling. Beverage container processing centres will be paid for electronics based on storage space provided and on the quantity of electronics they unload and load.

Depots and beverage container processing centres accepting electronics will be required to meet standards for collecting, storing and preparing electronics for shipment. These standards will ensure the safety of depot staff and the public, protect the environment from exposure to potential pollutants, and ensure electronics are stored securely to minimize theft and vandalism.

2.4 Community and Municipal Governments

ENR invites community and municipal governments to help promote the Electronics Recycling Program. They have much to gain from the program and their support is needed to improve program awareness and participation by their residents.

Community and municipal governments will receive additional benefits from the Electronics Recycling Program besides the environmental and human health benefits of keeping electronics off the land and out of landfills. Diverting electronics from landfills will extend landfill life and result in related long-term cost savings for community and municipal governments. Electronics depots operated by private enterprise will reduce the work load of community and municipal governments, which are currently managing this waste. Funding provided to depot operators will also support local economies.

ENR has begun gathering input from community and municipal governments on their role in supporting the program. ENR will continue gathering this input and will work with the NWT Association of Communities to reach out to their members. The potential roles of community and municipal governments are described on the following page and will vary depending on the electronics collection system used (see map page 5).

Key roles for community and municipal governments **in larger communities with year-round electronics recycling depots** include:

- Post information provided by ENR about the program at community/municipal government offices, at the landfill and in other public spaces.
- Include an insert provided by ENR about the program in utility bills (where applicable).
- Promote the program (e.g. promotion at public events and on the radio).
- Share information about the program with landfill staff and have them tell residents about the program and discourage residents from bringing electronics to the landfill.
- Keep electronics out of the landfill using one of these options:
 - Preferred option: Designate an area at the landfill for electronics collection. Have a staff member regularly bring electronics collected to the community depot.
 - Consider charging a fee on electronics brought to the landfill. This fee will provide an incentive for residents to bring their electronics to the depot (where no fees are charged for electronics). Fees collected can be used to cover the cost of staff transporting electronics from the landfill to the depot.

Key roles for community and municipal governments **in smaller communities with collection events** include:

- Help promote ENR-hosted community collection events:
 - Post information provided by ENR at community/municipal government offices and in other public spaces.
 - Tell residents about the program through other means (e.g. promotion at public events and on the radio).
 - Include an insert provided by ENR in utility bills (where applicable).
- Discourage residents from bringing electronics to the landfill:
 - Post permanent signage provided by ENR at the landfill asking people to hold onto their electronics and to bring them to collection events or depots in larger communities.
 - Share information provided by ENR about the program with landfill staff and encourage them to promote the program.
- Consider hosting an electronics recycling event which would include:
 - Collecting electronics in the community and transporting them to the closest depot that accepts electronics (see map page 5).

2.5 Electronics Recycler

An electronics recycler takes electronics apart in a safe manner, segregates material types and sends materials to recycling markets. ENR will coordinate a Request for Proposals process to select an electronics recycler.

To participate in the RFP, recyclers will be required to be registered under Alberta's electronics recycling program. An estimated 87 to 240 tonnes of electronics will be collected a year from the NWT program. Using an Alberta recycler will minimize transportation costs. An Alberta registered recycler will ensure the minimum environmental, health and safety, and operational requirements are met.

The recycler selected for the NWT will report regularly to ENR on the electronics they process, including quantities of specific materials received and where materials were sent for recycling (i.e. downstream documentation). The recyclers will also be subject to audits by external experts.

Once the NWT electronics collection system is established, ENR may consider the feasibility of an NWT electronics recycling facility.