
ALBERTA RECYCLING MANAGEMENT AUTHORITY

Alberta's Electronics Recycling Program

Processor Status Report

November 2005



**ELECTRONICS
RECYCLING ALBERTA**

A Division of Alberta Recycling Management Authority

Alberta's Electronics Recycling Program

Alberta Recycling Management Authority (ARMA)

Program – Background

Alberta is solidifying its reputation as a leader in environmental management with its electronics recycling program, the first of its kind in Canada. Since October 2004, more than 100 collection sites and e-roundups have been established across the province to collect eligible electronics, including: televisions, computers, computer monitors, CPUs (including keyboards, mouse, cables, speakers), printers/printer combinations, laptops and electronic notebooks, which were previously going into Alberta's landfills.

Alberta Recycling Management Authority (ARMA) has been mandated through regulation to administer the electronics recycling program in Alberta. On September 15, 2004, ARMA adopted the "Waste Electronics Incentive Program for Collectors and Processors" (the Program). The administration of the Program is done through Electronics Recycling Alberta (ERA), a division of ARMA.

Municipalities collect waste electronics for recycling at the more than 100 municipal collection sites registered under the Program. Collected materials are then transported by Registered Processors for processing and further recycling. To qualify as a Registered Processor and be eligible for incentives paid under the Program, processors must meet the Processor Qualification Requirements, as well as other terms and conditions specified under the Program.

Since February 1, 2005, more than 1,600 suppliers and retailers began charging an environmental fee on the sale of designated new electronic products. The environmental fees are used to cover the costs associated with the collection, transportation and processing/recycling of electronic materials, public information and awareness programs, and research into better processing/recycling technologies.

In order to promote harmonization among Canadian electronics recycling programs, the Program is based on the Canadian Council of Ministers of the Environment (CCME) Principles for Electronics Product Stewardship. The Program is also, for the most part, based on the Vendor Qualification Requirements developed by Electronics Product Stewardship Canada (EPSC), an organization representing major electronics manufacturers working to design, promote and implement sustainable solutions for Canada's electronics waste.

For more information, contact ARMA at 1.888.999.8762 (toll free) or visit www.albertarecycling.ca

This status report has been prepared in the Program's first year (start-up) to provide information to stakeholders, including the general public and other interested parties, regarding Program results and the activities of Registered Processors. It is expected that a similar report for Registered Processors and downstream processors will be available every year. Attached as an Appendix is Stantec's report regarding the ongoing environmental, and health and safety audit and review process that is being conducted in order to monitor conformance to Program requirements.

PROGRAM RESULTS and REGISTERED PROCESSORS' ACTIVITIES
 (Update as of August 31, 2005)

Program (eligible) e-Materials - Collected

Televisions 18" <:	6,555 units
Televisions 19" – 29":	12,543 units
Televisions 30" – 45":	2,499 units
Television 46">:	408 units
Monitors:	49,914 units
Computers:	45,320 units
Laptops:	1,559 units
Printers:	26,301 units

Destination of e-Materials

CRT Glass:	Currently shipped to two specialized glass recyclers in the USA. A Canadian glass smelter may become an option in the near future.
Circuit Boards:	Sent to downstream processors to recover metals (gold, copper, etc.) – some are processed with other metals and others are separated out to recover precious metals.
Steel:	Sent to steel mills for recycling
Aluminum:	Sent to aluminum smelters for recycling
Batteries:	Sent to battery recyclers
Plastics:	Sent to plastics recyclers to be recycled into plastic pellets/flakes for recycled products
Wires and cables:	Some are processed with other metals

Tonnes of e-Material Processed

- Tonnes Processed as of August 31/05: 2,152 tonnes. This includes:

Metals

Steel/Ferrous Metal:	762 tonnes
Circuit Board Material:	107 tonnes
Aluminum:	15 tonnes
Wires & Cables:	17 tonnes
Misc. metals and Low Grade Wire:	187 tonnes

CRT Material

CRT Tubes (whole):	62 tonnes
CRT Yokes:	3 tonnes
CRT Glass (crushed):	319 tonnes
Whole Monitors/TVs	112 tonnes

Plastics

Plastics:	186 tonnes
Plastic/Metal Mix:	177 tonnes

Other

Preliminary Processing as	
Smelter Feedstock:	118 tonnes
Whole Keyboards:	0.44 tonnes
Batteries:	0.505 tonnes
Cardboard	2 tonnes
Toner & Inks:	2 tonnes

Residue to Landfill

Residue to landfill	81 tonnes
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(i.e. wooden TV consoles, miscellaneous packing material such as Styrofoam, diskettes, CDs, floor sweepings)

Listing of Registered Processors

There are five Registered (qualified) Processors (as at November 2005):

- HMI Industries (Harpers Metals Inc.)
- e-Cycle Solutions Inc.
- Recycle-Logic Inc.
- Shanked Metals
- Technotrash Alberta

Key Requirements – Registered Processors

- All Registered Processors must possess and maintain a documented Environmental Management System (EMS) to ensure adequate control over the processor's impact on the environment.
- All Registered Processors must identify and comply with all applicable health and safety regulations (federal, provincial/state, municipal and industry standards).
- All Registered Processors must maintain a monitoring program to track key processes, compliance with applicable legislation and any emissions or effluents being generated.
- All Registered Processors must identify all subcontractors (downstream processors) that are used to process electronics under the Program through to a final recycled state.

What happens to electronics once they are recycled?

Through Alberta's electronics recycling program, Registered Processors pick up eligible electronics from municipal collection sites (of which there are more than 100 in Alberta), from Albertans who have discarded them. At the Registered Processors' facilities, the electronics are primarily broken down into glass, metal and plastic, and shipped to downstream processors for further recycling. The materials from the Alberta Registered Processors are currently sent to both Canadian and U.S. companies (the Program does not allow export of downstream processing in non-OECD countries because of potential environmental concerns, and health & safety issues for local workers). Materials are processed into their base form, for example, plastic pellets are melted down and made into other products such as toys.

Registered Processors are entitled to incentive payments under the Program only where they can demonstrate that the waste electronics have been satisfactorily recycled or processed, or otherwise effectively managed in accordance with principles agreed to by the Canadian Council of Ministers of the Environment. Where waste electronics are exported from Canada for further processing or recycling, they must be exported only to facilities with a documented commitment to environmentally sound management and fair labour practices.

Under the Program, audits and reviews of Registered Processors are conducted in order to monitor conformance to Program requirements regarding the environment, health and safety, operations and maintenance, and record keeping. Reviews of downstream processors are also conducted.

See the attached Stantec report for a summary of audit and review activities and findings to date.

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