



**OES Report on
Performance of Year 1 Final Revised (Phase 1 and 2)
Waste Electrical & Electronic Equipment (WEEE)
Program**

April 1, 2010 to March 31, 2011

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1.0 Executive Summary

1.1 Key Performance Indicators Summary

Indicators	Year 1 - Revised (Phase 1&2) Program		Year 1- Phase 1 Program	
	<i>Total Tonnes</i>	<i>Kg/Capita</i>	<i>Total Tonnes</i>	<i>Kg/Capita</i>
<i>Operational</i>				
Collected	34,585	2.62	17,303	1.31
<i>Accessibility</i>	<i>Total Kilometers</i>	<i>% Ontario Pop Covered¹</i>	<i>Total Kilometers</i>	<i>% Ontario Pop Covered</i>
	25 km	91%	25 km	96%
	10 km	85%	10 km	85%
	OES sites and Generators	OES events and round-ups	OES sites	OES events and round-ups
	527 sites 2,347 generators*	452	314	250
<i>Awareness</i>	Work in progress.		22% of Ontarians aware of the program under Phase 1.	
	# of Service Providers²	# of Stewards/Remitters	Service Providers	# of Stewards/Remitters
	446	797	209	735
<i>Financial</i>	Total Program Cost per tonne	Detail	Total Program Cost per tonne	Detail
	\$1,634	\$1,222 Operational cost per tonne \$412 Overhead cost per tonne	\$1,604	\$1,201 Operational cost per tonne \$396 Overhead cost per tonne

* - work-in-process to determine which are public-facing

2.0 Program Description

OES is proud of the progress made and the momentum created in diverting end-of-life electronics (EOL) and their associated hazardous components from our landfills. Our efforts have resulted in 34,585 tonnes of electronic waste collected in our second year of program operations, representing a 100% improvement over the 17,303 tonnes collected in our first year of program operations, for a total of nearly 52,000 tonnes of e-waste since program launch.

This could not have been accomplished without the help of our valued partners and service providers including our municipal, retailer and not-for-profit collectors; transporters; consolidators; repackers; and primary processors that comprise our robust collection and processing network across the province. While the first year of the program concentrated on establishing the infrastructure that has served as the backbone of this network – something that, unlike other

¹ Please note that for April 1, 2010- March 31, 2011 the 2010 census data was used whereas the Year 1 Performance report used 2006 census data.

² The total number of service provider companies does not equal to the total number of sites as one service provider can operate multiple sites.

industry-led e-stewardship programs, did not exist in advance of program launch – we are now working to continuously improve the program to optimize collection, reuse and recycling, all while maintaining the highest standards for protection of human health and the environment which have become hallmarks of the OES Program.

The Revised (Phase 1 and 2) Waste Electrical & Electronic Equipment (WEEE) Program launched April 1, 2010 expanding on the principles of the first phase of the program to collect and divert EOL electronics from landfill. Under the program, Stewards (defined as brand owners, first importers, franchisors and/or assemblers) are obligated to register with Ontario Electronic Stewardship (OES), file monthly reports on the quantity of designated Electrical & Electronic Equipment (EEE) they sell or distribute for use in Ontario, and make payments to OES. These fees, in turn, support and fund the activities related to safe and responsible reuse, refurbishment and recycling of WEEE in the Ontario program, including direct material costs for the collection, transportation, consolidation, and processing of WEEE, and other expenses such as promotion and education (P&E), research and development (R&D), and program administration.

While the original Phase 1 program launched on April 1, 2009, the expansion of the Phase 1 program in the second year broadened the list of material categories to include printing, copying and multi-functional devices, display devices, portable computers, and computer peripherals as well as adding new categories for telephones and answering machines, cellular devices and pagers, and image, audio and video devices. Under the Revised Program, OES manages a total of 44 materials grouped into 8 categories. For a full list of designated materials, please refer to the OES website at www.ontarioelectronicstewardship.ca/materials.

During its second year, the program expanded communication and outreach initiatives to encourage additional residential as well as industrial, commercial and institutional (IC&I) participation. A province-wide P&E campaign focused on educating Ontario residents and businesses about the opportunities to properly manage WEEE.

Throughout the first year of the program it was evident that many organizations were managing WEEE outside of the OES system. This was partly due to a lack of awareness but more importantly because organizations were already contracting with reuse and recycling organizations prior to the start of the OES program.

A number of organizations had existing contracts with reuse and recycling organizations that were not OES-approved, preventing OES from collecting information on the volume of WEEE handled in the province through this channel. Moreover, OES approved Primary Processors (Processors) continued to provide reuse and recycling services to their clients. These organizations chose to bypass the OES collection and transportation system by contracting with Processors for services that OES was not able to provide including secure asset management, confidential destruction, and individual data security requirements (e.g. video confirmation of destruction). These types of requirements are becoming more common place for large businesses, financial institutions, all levels of government and institutions (e.g. health care, education) who want to ensure data security and integrity. As a result of these external collection activities and the confidential nature of the business relationship of Processors and their clients, OES was unable to report this information as diversion.

To address the challenge of information flow from external diversion activities, OES introduced the Direct Ship program during the last quarter of the Phase 1 program. However, the modest success of the program required additional consultation with Processors, other stakeholders and WDO. Through this process in early 2010, OES agreed to introduce a new initiative designed specifically to address the two barriers experienced in the first Year of the program, and to halt the operation of the Direct Ship program on October 4, 2010.

The Processor Incentive (PI) Program was introduced in its place on October 4, 2010. This program provides financial incentives to OES approved Processors to provide collection, transportation and processing services for residential as well as IC&I WEEE collected and processed. Processors were required to register their generators (which could include IC&I clients and Stewards) with OES and track Ontario generated WEEE via a signed Waybill process.

With the introduction of the PI option, the OES program includes the following key elements:

OES Collection Sites – OES has worked to expand the number of collection sites and events across Ontario. The collection network includes over 500 permanent collection sites and 400 events operated by municipalities, not-for-profit and community social organizations, private operators and government departments and agencies.

OES Transportation and Consolidation – OES has a network of contracted transporters and consolidators who transport collected WEEE from collection sites to consolidation centres. At consolidation centres, the collected material is weighed, stored and assembled into tractor trailer shipments to Processors.

OES Re-packers – OES contracted with re-packing companies who received roll-off bins for repacking purposes. The materials collected via roll-off bins were then palletized as per OES collection specification for delivery to consolidation points.

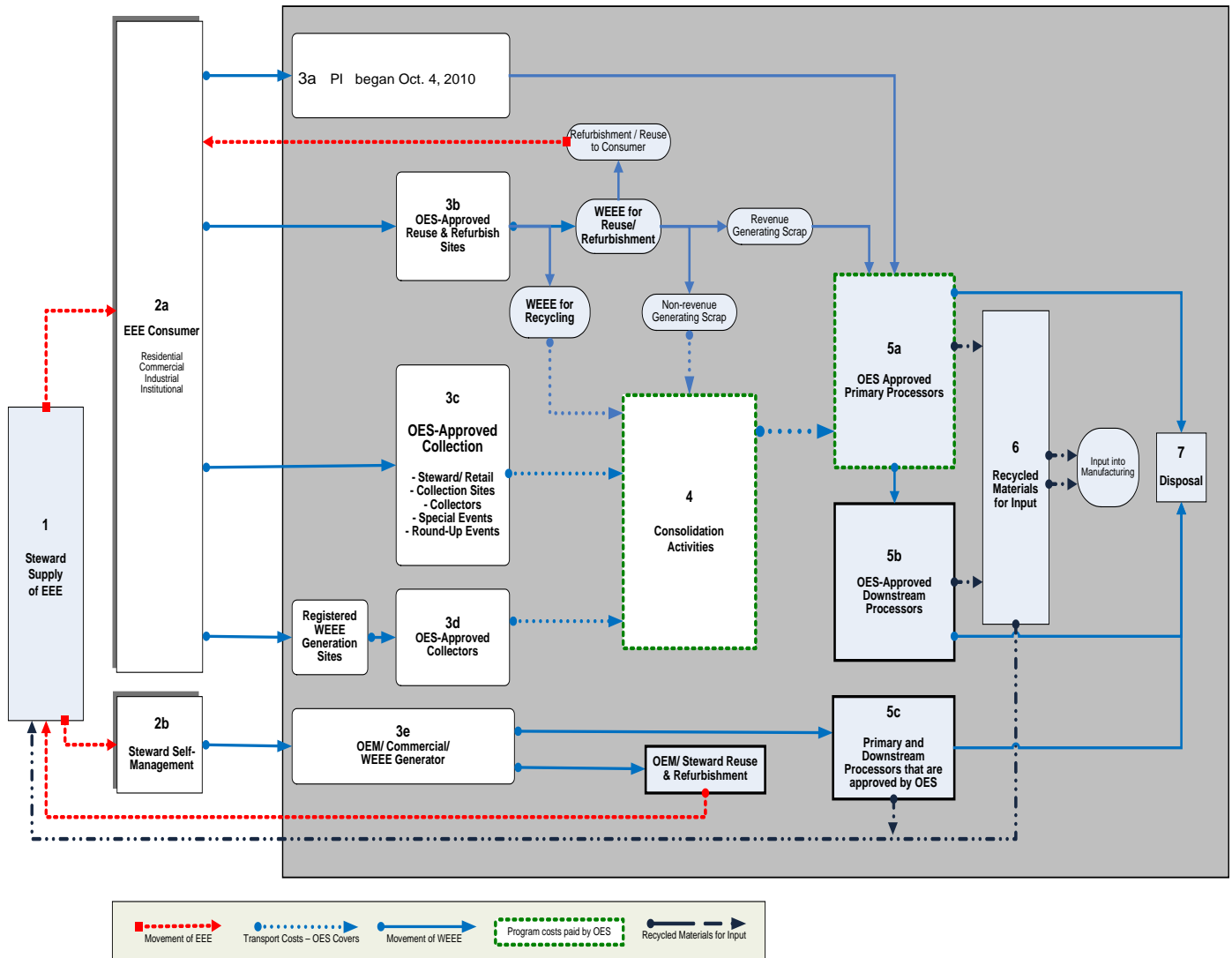
OES approved Primary Processors (Processors) – Once approved under the Electronic Recycling Standard (ERS), these companies contract with OES to recycle WEEE.

Generators – Can be a private sector, non-profit, or public sector organization that contracts directly with, and is registered by, an OES Processor. A Generator can provide collection and transportation services but must partner with OES Processor for end of life management. Public facing generators featured on the Recycle Your Electronic (RYE) website are referred to as affiliates.

OES maintains a system to track the flow of EOL electronics through key stages from drop off at OES approved collection sites via OES contracted transporters to consolidation centres where material is verified and redistributed via transporters to approved Processors for EOL processing. It also maps the flow of EOL electronics from registered Generators through to Processors through a separate waybill manifest system.

WEEE material collected at OES approved Reuse/Refurbishment sites is prepared for resale or redistribution. The remaining units, parts and waste not suitable for reuse, are sent to OES approved Processors for EOL management. Figure 1, taken from page 29 of the Final Revised (Phase 1 and 2) WEEE Program Plan, provides an illustration of the flow of material from collection through to EOL management.

Figure 1 Flow of Materials and OES Funding



2.1 Registration and Approval of Stewards & Service Providers

With the start of the Revised Program, OES enhanced the online Application and Registration System in the following ways:

- 1) The Steward portion of the system was updated to allow for material changes in preparation for the launch of the Revised (Phase 1 and 2) Program, such as changes in Steward fees and obligated materials. The system was modified in early March to allow new and existing Stewards/Remitters to declare their obligation under the Revised Phase 1 and 2 Program.
- 2) The registration system for OES service providers was updated to include changes including revisions to the ERS standard for new applicants and new material categories, as well as overall system improvements.
- 3) The system was updated to allow for the addition of the Revised Phase 1 and 2 materials.

Companies continued to register and apply to OES through the online system. From this initial registration (see Figure 2-4 within Appendix 1), the application splits into separate and more detailed application and processes for each service. A more detailed description of the process for each service provider is provided in Appendix 1.

Table 1 below summarizes the number of service provider applicants and approved sites during the first year of the Revised Phase 1 and 2 Program. The number of application received also incorporates partly completed but submitted applications, applications that were reviewed but abandoned as companies could not meet the OES established guidelines and standard of operation.

Table 1 - OES Service Providers April 1, 2010-March 31, 2011

Type of Service Provider	Applications Received	Total OES Approved Service Providers ³	Total OES Approved Sites ⁴
OES Collectors	398	381	527
Transportation Companies	190	32	32
Consolidation Companies	85	9	16
Primary Processors	7	13	16
Reuse/Refurbishment	128	7	20
Supplies/Special Event Services	22	22	22

OES Collectors

All OES approved collectors who operate under the OES standards are eligible to receive a collection incentive. In the second program year, the number of approved collection sites grew to 527 permanent OES collection sites. In addition to OES collectors, the program expanded in October 2010 to include 2,347 registered generators.

Transportation Companies

OES continues to work with 32 transportation companies across Ontario. This is an additional 14 companies when compared with the first phase of the program.

Consolidation Companies

OES continues to contract with 9 companies who provide 16 consolidation sites (4 each in the North, West, East, and Central) on behalf of the program. These were approved by the OES Board in March 2009. The names of the companies and locations are posted on the OES website. It is important to note that Processors are not able to contract with OES as consolidation centres as the program needs to uphold its system of checks and balances. In order to ensure that materials are being properly accounted for Processors could not consolidate OES collected materials as such materials could have been directed under allocation to other Processors. This ensured the integrity of the OES collected material and prevented removal of valuable components. One consolidator transitioned to become an OES approved Primary Processor in Program Year 2 and therefore, the program now operates with one less consolidator site.

³ Total OES approved service providers represents both service providers approved under the first phase of the program and the revised phase to reflect the total service providers under the program.

⁴ Total sites approved represents both service providers approved under the first phase of the program and the revised phase to reflect the total service providers under the program.

Supplies Special Services and Re-packers

OES continued to contract with 4 companies to provide supplies and special services in the second year of the OES program, including labour for on-site OES events. In addition 18 approved re-packaging facilities operated 25 re-packing sites. These facilities repacked roll off bins into proper skids for transport proposes for end of life management.

Reuse/Refurbishment

OES has a total of 16 approved Reuse and Refurbishment locations that have successfully been audited against the OES Reuse and Refurbishment Standard. These facilities have been actively reporting to OES over the past year.

Processor Audits and Allocation

During the second year of the program, OES continued to accept applications online from companies wishing to become OES Approved Primary Processors (OES Processor). SGS Canada Inc. continued its role as the third-party auditor undertaking all primary and downstream OES Electronic Recycling Standard (ERS) audits.

New applicants who submitted their online applications after the start of the Revised Phase 1 and 2 Program were audited against the revised OES ERS (2009) as outlined in the revised program plan. However, any applicants who had begun the audit process prior to April 1, 2010 were permitted to continue their audit under the OES ERS 2008. Both versions of the ERS ensured that applicants met the Ontario specific compliance requirements and ensured the entire downstream processor chain was clearly identified and audited until the final point of disposition for each WEEE material.

SGS completed 61 audits and follow-up audits in the second year of the program; this included a combination of document and on-site audits, as well as revisions to existing OES Processors' assessment reports due to the addition or deletion of downstream vendors.

Once successfully audited, SGS would make their recommendation to OES for final approval.

An additional 5 primary processors were approved during the second year of the program resulting in a total of 13 OES Processors as listed below. Out of the 13, 3 Processors were not part of the original allocation of material from the OES network. These 3 are italicized below.

- Sims Recycling Solutions, Brampton , Ontario
- FCM, Montreal, Quebec
- GEEP, Barrie, Ontario
- eCycle Solutions, Mississauga, Ontario
- Toronto Recycling Inc., Richmond Hill, Ontario
- ADL, Toronto, Ontario
- Artex, Toronto, Ontario
- La Relance, Gatineau, Quebec
- Target Recycling, Ajax, Ontario
- CFER Outaouais (Centre de Formation en Entreprise et Récupération), Gatineau, Quebec
- *Greentec International, Cambridge, Ontario*
- *Mida International, Stoney Creek, Ontario*
- *Electro-Shred, Brantford Ontario*

Primary processors who participated in the original RFP for allocation only received WEEE for processing from the time that they had been successfully verified to the ERS and approved by the OES Board of Directors. The allocation percentage was awarded at the beginning of the OES program for a period of 18 months until October 1, 2010. Primary processors only received their respective allocation of OES materials after completing the ERS audit and receiving OES approval. This was to ensure that collected WEEE was not stockpiled.

The second RFP for allocation was issued on September 8, 2010 and was due on September 27, 2010, at which point OES began evaluating RFP submissions and verifying the recycling

efficiency rates for each Processor. To accommodate the second RFP for allocation, OES extended the original allocation period for an additional 60 days.

The selection of Processors from the RFP would take place in mid-November and the 12-month allocation would be effective as of December 1, 2010. However, OES decided to extend the existing OES Processor Agreements for an additional 60 days following which the contracts were extended until July 31, 2011.

3.0 Steward Performance

3.1 Steward Registration and Reporting

The [OES Online Application and Registration System](#) was designed to allow companies who have determined that they are obligated Stewards or companies who wish to participate in the Remitter's process to formally register with the program. Following registration, companies are asked to confirm and declare their obligation and file monthly Steward Reports and remit payments using the [OES Online Reporting and Remitting System](#).

Phase 1 Stewards and Remitters were asked to reconfirm their obligation for the EEE materials presented under the revised program by April 1, 2010. In addition, OES notified 4,427 organizations which might have had legal obligation under the program. The first 3,863 organizations were notified in February 2010 and 564 new notifications were sent out in August 2010. All notified organizations were asked to register through the OES Registration and Application System, confirm their registration within the Online Reporting System, and start filing and making payments to OES for the EEE they supplied into Ontario. By the end of March 2011, 797 companies had confirmed their status as a Steward and/or Remitter or Sub-Remitter. This figure incorporates the total number of both Phase 1 and Revised (Phase 1 and 2) Stewards. Table 2 provides a breakdown of the 797 organizations that are Stewards, or participants in the Remitter's Process.

Table 2 - Summary of Steward/Remitter/Sub-Remitter Registration

Registered & Confirmed	Number of Companies
Steward/Remitter/Sub-Remitter ⁵	582
Remitter/Sub-Remitter	177
Steward only	38
Total	797

Throughout the second program year, OES approved 883 new Remitter and 616 new Sub-Remitter agreements and cancelled 349 Remitter and 296 Sub-Remitter Agreements. OES currently has 6,262 active Remitter Agreements and 3,873 active Sub-Remitter Agreements, for a total of 10,135 active agreements.

OES continues to identify new potential stewards and provide them with a notification letter. Each month OES posts the number of "outstanding reports" on our website and follows up with individual Stewards and Remitters by email and telephone to ensure all obligated organizations file reports and make outstanding payments. Organizations that registered but were non-compliant were contacted by OES to ensure they understood their obligations under the program. Non-compliant companies may be referred to the Ministry of the Environment's Investigations and Enforcement Branch for possible investigation and enforcement activities under the Waste Diversion Act (WDA).

⁵ Please note that a single company can be both a steward for their own products, and a remitter or sub-remitter for another Steward's products.

In the fall of 2010, OES contracted with Your Assistant Inc. to complete steward compliance reviews independent from the OES internal review process. Your Assistant is an accounting firm that also conducts compliance audits for three other provincial e-waste stewardship programs (ACES, SWEEP and ESABC). The company was contracted to complete 20 audits by the end of second program year; however only 8 reviews were completed – 6 of which were unique to OES while 2 were joint reviews with other provincial programs. The remaining 12 audits have been rescheduled and will start at the beginning of the third program year. This was done to accommodate joint audit schedules to harmonize with other industry-led provincial programs.

Table 3A presents 12 months of material-specific data compiled during the second year of the program compared to the Revised Phase 1 and 2, Year 1 targets. Table 3B aggregates the units and fees collected under the Steward Self Managed Program.

Table 4 presents a summary of the EEE product supplied into Ontario in the first 12 months of the revised program. The Table summarizes the projected units and weight of EEE by product category. In order to calculate the projected tonnage of the EEE supplied OES applied average unit weights from Table 3.2 of the Revised (Phase 1 and 2) Program Plan

Table 3A- Revised Phase 1 and 2 Planning Estimates against Actual Steward Reports

Revised Phase 1 & 2 Products	Actual 12 Months Reported (units)	Target Revised Phase 1&2 Plan (units) ⁶	Performance	Actual 12 Months Reported (Fees \$)	Target Revised Phase 1&2 Plan (Fees \$)	Performance
Monitors	687,110	873,695	79%	\$8,419,430	\$9,629,698	87%
Display(<18")	42,935	39,473	109%	\$525,973	\$1,556,600	34%
Display (18"-29")	518,357	289,371	179%	\$6,354,118	\$19,813,675	32%
Display (>29"-45")	814,549	714,708	114%	\$21,401,764	\$8,595,255	249%
Display (>45")	339,464	244,474	139%	\$8,915,816	\$4,365,436	204%
Desktops and CPUs	765,594	703,212	109%	\$5,961,910	\$7,887,951	76%
Portable	1,961,784	1,471,394	133%	\$5,400,883	\$1,643,246	329%
Computer Peripherals	5,161,375	2,978,757	173%	\$2,067,087	\$1,191,618	173%
Printing Devices	1,206,891	1,658,449	73%	\$6,518,109	\$8,955,537	73%
Floor Standing Printing Coping Devices	26,794	17,330	155%	\$870,805	\$563,213	155%
Telephones and Answering Machines	1,552,447	2,443,901	64%	\$1,552,447	\$2,443,842	64%
Cell devices and pagers	6,762,096	5,487,297	123%	\$676,210	\$550,225	123%
Personal/Portable Image, Audio, Video Devices	4,730,062	2,610,475	181%	\$1,892,025	\$1,043,838	181%
Home/Non Portable Image, Audio, Video Devices	2,114,928	2486268.563	85%	\$5,816,052	\$6,837,080	85%
Home Theater in a Box	116,406	319271	36%	\$1,158,240	\$3,176,692	36%
Aftermarket Vehicle	210,361	238896	88%	\$599,529	\$680,838	88%
Total Units	27,011,153	22,576,973	120%	\$78,130,398	\$78,934,744	99%

Table 3B- Revised Phase 1 and 2 Steward Self Manage Reports

Revised Phase 1 and 2 Products	12 Months Total Units	12 Months Reported Common Cost (Fees \$)
Aggregated EEE ⁷	1,547,516	\$35,757

⁶ The units are reflecting Target Revised (Phase 1 and 2) Fees rates not Revised (Phase 1 and 2) WEEE Program plan.

⁷ Includes units from the computer peripheral and personal portable image, audio video devices

Table 4 – Supplied for Use in Ontario against Actual Year 1-Revised Phase 1 and 2 Tonnes/Units Reported

Year 1 Supplied to the Market							
Product		Actual EEE Reported (Tonnes)	Revised Phase 1 and 2 Plan EEE Supplied (Tonnes)	Performance	Actual EEE Reported (Units)	Revised Phase 1 and 2 Plan EEE Supplied (Units)	Performance
Material Category							
Display Devices	Computer Monitors	5,291	8,191	65%	687,110	1,064,000	65%
	Display Devices <18"	6,286	767	35%	42,935	1,278,000	34%
	Display Devices 18"-29"		9,259		518,357	441,000	
	≤29" Screen Total		18,217		561,292	1,632,000	
	Display Devices 29"-45"	43,045	24,194	129%	814,549	691,000	129%
	Display Devices >45"		9,086		339,464	202,000	
	> 29" Screen Total		33,280		1,154,013	893,000	
Desktop Computers		5,665	10,268	55%	765,594	1,388,000	55%
Portable Computers		5,689	4,499	126%	1,961,784	1,551,000	126%
Computer Peripherals		5,678	2,030	280%	5,161,375	1,891,000	273%
Printing, Copying & Multi- Function Devices	Desktop and Portable Printing, Copying and Multi-Function Devices	11,586	32,052	36%	1,206,891	3,553,000	34%
	Floor-Standing Printing Devices	2,010	1,249	161%	26,794	16,000	167%
	Floor-Standing Copying Devices						
Telephones and Telephone Answering Machines		1,863	5,324	35%	1,552,447	4,427,000	35%
Cellular Devices/ Pagers		1,352	959	141%	6,762,096	4,812,000	141%
Image, Audio & Video Devices	Personal/Portable	3,784	2,257	168%	4,730,062	2,434,000	194%
	Home/Non-Portable	10,363	14,080	74%	2,114,928	2,922,000	72%
	Home Theatre in a Box (HTB)	2,666	7,378	36%	116,406	322,000	36%
	Aftermarket Vehicle	484	658	74%	210,361	288,000	73%
Phase 1 and 2 Materials Total		105,762	132,251	80%	27,011,153	26,129,000	103%

3.2 Methodology for Setting Steward Fees for Revised Phase 1 and 2 Program

OES developed a fee-setting methodology for the Phase 1 WEEE Program plan. This methodology was the basis for setting material fee rates for EEE. Year 1 fees were based on the best available data and estimated Year 1 costs. Each program year, OES develops an annual budget with the best available data to ensure that the sum of the Stewards' fees collected is aligned with total program costs.

Prior to the launch of the Revised Phase 1 and 2 WEEE Program, OES informed stakeholders that changes to the material fees presented in the approved program plan were necessary. Stakeholders were provided with a technical memorandum presenting key issues and were asked for their feedback. In January 2011, after stakeholder consultation was complete, OES presented revised fee rates effective April 1, 2010 through to March 31, 2011. The revised methodology is provided in Appendix 3.

3.3 Steward Self Manage

The Steward WEEE Self Manage option has been designed for organizations who are Stewards of Phase 1 and Phase 2 EEE who self-manage their EEE at the end of its lifecycle using an OES approved Processor. This program enhancement is voluntary and participation is subject to OES approval. Under this option, Stewards who are approved to self-manage some or all of their EEE are not absolved from their legal obligations under the WEEE Program; but rather are exempt from Steward reporting and making monthly payments based on material EEE fees for the self managed EEE.

The approval process consists of the following: completion of the Steward Self Manage application which asks the Steward to describe their self managed program including end-of-life processing; OES application review; and entry into a Steward Self Management Agreement with OES. The Agreement stresses that the Steward is obligated to file reports on an agreed-upon schedule indicating the total units supplied into the Ontario marketplace that will be self-managed and the total weight per material category of WEEE processed/reused by OES Processors.

OES received 5 Steward Self Manage applications throughout the year; three of the five have been approved, one is still in progress, and the remaining company decided to abandon the application process in March 2011 and is in the process of re-filing their outstanding Steward Reports. For reporting purposes, OES has aggregated the data received from all approved Self Managed Stewards. A total of 159,113 kilograms of self-managed WEEE was recycled and 93,408 kilograms was reused/refurbished returning it to the market for a second life.

4.0 Program Performance - Material Flow

4.1 Collection Accessibility

An important objective of the first year of the OES program was to increase the accessibility of secure drop-off points for residential and business generators of EOL electronics to ensure proper recycling. To achieve this objective, OES built upon existing municipal collection networks as well as solicited the participation of not-for-profit organizations and IC&I partners. All permanent sites and events were approved under the requirements set out in the OES collection standard to properly receive, sort and prepare WEEE for transport to OES consolidation centers.

New sites continued to be assessed against the OES collection standard while existing sites continued to provide services under a revised collection agreement inclusive of Revised Phase 1 and 2 materials and, if eligible, received a collective incentive.

In 2010, collector sites operating under the OES program included permanent locations (municipal, non-municipal), special events (public/municipal, non-municipal), OES Round-Up events, and Direct Ship/IC&I Generators. The Direct Ship program was replaced by the

Processor Incentive model (PI) which allowed OES Processors to register their clients, thereby increasing the accessibility of OES recycling channels to all Ontarians. OES collection sites had the option to partner with OES Processors as Generators and end their agreement with OES (in which case they would no longer be eligible for the collection incentive payment) or remain within the OES collection network.

All approved OES collection sites and events that were accessible to the public were posted on the searchable *Do What You Can* website, which was rebranded as *Recycle Your Electronics* in September 2010, to allow residential and business generators to locate collection sites. In the fourth quarter of the program year, it was decided that public facing Generators could be listed as OES affiliates on the *Recycle Your Electronics* website.

OES Round-Up Events Services

In 2010, OES actively targeted areas of the province with no, limited or infrequent access to convenient WEEE collection services with the goal of improving accessibility for all Ontarians. OES focused on holding round-up events in a number of Northern Ontario communities including Red Lake, Kirkland Lake, Kenora, Fort Frances, Hearst, Timmins, Bonfield, New Liskeard and Kapuskasing. OES held 47 events over the first year of the Revised Phase 1 and 2 program.

Mobile E-Drive

OES completed its series of Mobile E-Drive collection events across 14 Ontario cities in September, October and November. The E-Drive events received over 7,500 vehicles and collected 333 tonnes of WEEE. More detail is provided in section 5.0 Communications.

Table 5 presents a summary of accessibility during the second program year.

Table 5 - Summary of Accessibility for 12 Months of Revised Phase 1 and 2

Collector Sites	End of Phase 1 31-Mar-10	Revised Phase 1 and 2 Apr 1, 10 – Mar 31, 11	Total	Revised Phase 1 and 2 Accessibility Targets	Performance
Permanent locations – municipal	79	72	151	413	128%
Permanent locations - non-municipal	235	196	431		
OES Collection sites transferred to PI-Generators	0	-40	-40		
OES Collection site closure	0	-15	-15		
<i>Total Permanent Sites</i>	<i>314</i>	<i>213</i>	<i>527</i>		
Special Event - Public/municipal	116	82	82	253	179%
Special Event - Non municipal	110	323	323		
OES Round-up	24	47	47		
<i>Total Event Based</i>	<i>250</i>	<i>452</i>	<i>452</i>		
Direct Ship Program ⁸	5	-3	-8		
Generators ⁹	0	2,347	2,347		
Total Sites & Events	569	3,012	3,326	666	499%

Accessibility Maps

The accessibility of Ontarians to OES collector and generator sites is presented in Appendix 4. The provincial and regional analysis was conducted for both a 25 km and 10 km radius using the 2010 Ontario population statistic. The data shows that 12,038,885 Ontarians are within a 25 km radius of an OES collection site or event. This means that 91% of Ontario's population lives within 25 km of either an OES collection site, event, or affiliate generator site. With respect to urban communities with populations greater than 10,000, the data shows that 85% of Ontario's population or 11,273,940 people are within 10 km of an OES collection site, event or an affiliate site.¹⁰

When looking at accessibility percentages in greater detail, 91% Ontarians are within 25 km of an OES collection site and/or event while generator sites are accessible to 78% of the population. When performing this analysis on a radius of 10 km for urban communities with populations > 10,000, 83% of OES collection site and/or events are within 10 km accessibility radius while affiliate sites are accessible to 68% of Ontario's population.

When comparing the accessibility from Year 1 Phase 1 program with Year 1 Revised Phase and 2 program there is slight decrease due to the fact that the current 2010 census data was used to calculate the April 1, 2010- March 31, 2011 accessibility whereas the Year 1 Performance report used 2006 census data.

⁸ This program ended on October 4, 2010 replaced by the PI program. The sites have not been included in the total

⁹ Private sector, non-profit, or other entities that contracts directly with, and are registered by, an OES Processor. They can collect and transport WEEE but must use OES Processor for end of life management.

¹⁰ Please note that for April 1, 2010- March 31, 2011 the 2010 census data was used whereas the Year 1 Performance report used 2006 census data

4.2 Collection Performance

Table 6 presents a regional breakout of the total WEEE collected through the OES network of approved collection sites. This table does not reflect the total tonnage of collected material for the program as a whole, as it does not include regional data for the volumes collected under the Processor Incentive model and the Steward Self Manage program, or through Reuse and Refurbishment activities.

Table 6 - Summary of Collection by Region through the OES Collection Network April 1, 2010- March 31, 2011

Regional Volume Collected	April	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	Total
Central kilograms	1,487,073	1,387,957	1,382,123	1,410,172	1,257,399	1,533,482	1,548,211	1,233,667	889,294	915,401	634,417	590,294	14,269,490
Eastern kilograms	519,874	441,711	513,172	432,270	360,821	501,065	712,230	521,262	315,048	398,766	216,238	227,527	5,159,984
Northern kilograms	137,133	131,788	130,623	121,673	136,009	209,659	167,823	135,688	109,111	97,078	78,044	97,065	1,551,694
Western kilograms	591,085	586,810	744,888	624,860	609,924	739,717	661,046	444,533	234,163	316,029	165,189	173,061	5,891,305
Total Kilograms	2,735,165	2,548,266	2,770,806	2,588,975	2,364,153	2,983,923	3,089,310	2,335,150	1,547,616	1,727,274	1,093,888	1,087,947	26,872,473
Total Tonnes	2,735	2,548	2,771	2,589	2,364	2,984	3,089	2,335	1,548	1,727	1,094	1,088	26,872¹¹

¹¹ This total does not account for volumes (tonnes) collected through the PI program, steward self manage program, direct ship program or via OES approved reuse/refurbishment activities.

Collection Performance Summary

Table 7 presents a 12 month summary of total WEEE collected in Year 1 of the Revised Phase 1 and 2 Program. The table summarizes the WEEE collected from OES permanent collection sites and special events as well as volumes collected through the Direct Ship, Processor Incentive, and Steward Self Manage programs. The total volume is broken out by specific site and material types.

Table 8 is a graphical representation of the volumes collected under the Revised Phase 1 and 2 program compared with volumes collected under the Phase 1 program. Please note that this represents a 99% increase in tonnage collected when compared with the first year of operations while Table 9 represents Year 1 – Revised Phase 1 and 2 collection breakout.

Table 10 shows a comparison of the Revised Phase 1 and 2 Year 1 actual program collection performance against the target outlined in the Revised (Phase 1 and 2) WEEE Program Plan.

Table 11 provides a comparison of the Revised Phase 1 and 2 per capita targets as compared to OES performance in collection and recycling of EOL electronics.

Table 7 - Summary of Total Kilograms of WEEE Collected Year 1 Revised Phase 1 and 2

Type of Collector	Sites	Display Devices	Desktop Portable Computers	Printers and peripherals	Floor standing printing copying devices	Direct to Processor	Roll-off Bins	Collected Volumes (Kg)
OES Permanent Sites								
Commercial	113	6,136,699	931,481	3,078,206	230,342	162,463	0	10,539,191
Government	24	156,924	86,733	144,279	6,122	0	0	394,058
Municipal	142	4,011,211	574,697	1,372,069	28,348	110,857	1,999,456	8,096,638
Not-For-Profit	26	1,359,268	312,219	684,775	26,040	93,338	31,890	2,507,530
Retail	222	1,961,056	433,092	990,027	30,328	238,196	0	3,652,699
Reuse/Refurb	16	152,044	374,040	94,181	6,087	0	0	626,352
OES Special Events								
Commercial	82	114,279	26,062	64,041	621	52,778	76,456	334,237
Government	323	0	0	0	0	0	5,480	5,480
Municipal		66,444	8,902	27,765		10,807	339,955	453,873
Not-For-Profit		62,965	14,601	28,458	785	0	53,044	159,853
Retail		47,773	6,039	19,855	793	166,063	0	240,523
Round-up	47	47,026	19,403	55,119	327	17,279	349,237	488,391
Other Sites								
Processor Incentive (Generators)	2,347	2,914,761	789,737	2,101,802	709,925	0	0	6,516,225
Steward Self Manage	4	0	0	159,113	0	0	0	159,113
Direct Ship Program (Generators)	5	0	0	0	0	411,300	0	411,300
Total Kg		17,030,450	3,577,006	8,819,690	1,039,718	1,263,081	2,855,518	34,585,463

Table 8 – Total WEEE Collected in Year 1 Revised Phase 1 and 2 compared with Year 1 Phase 1

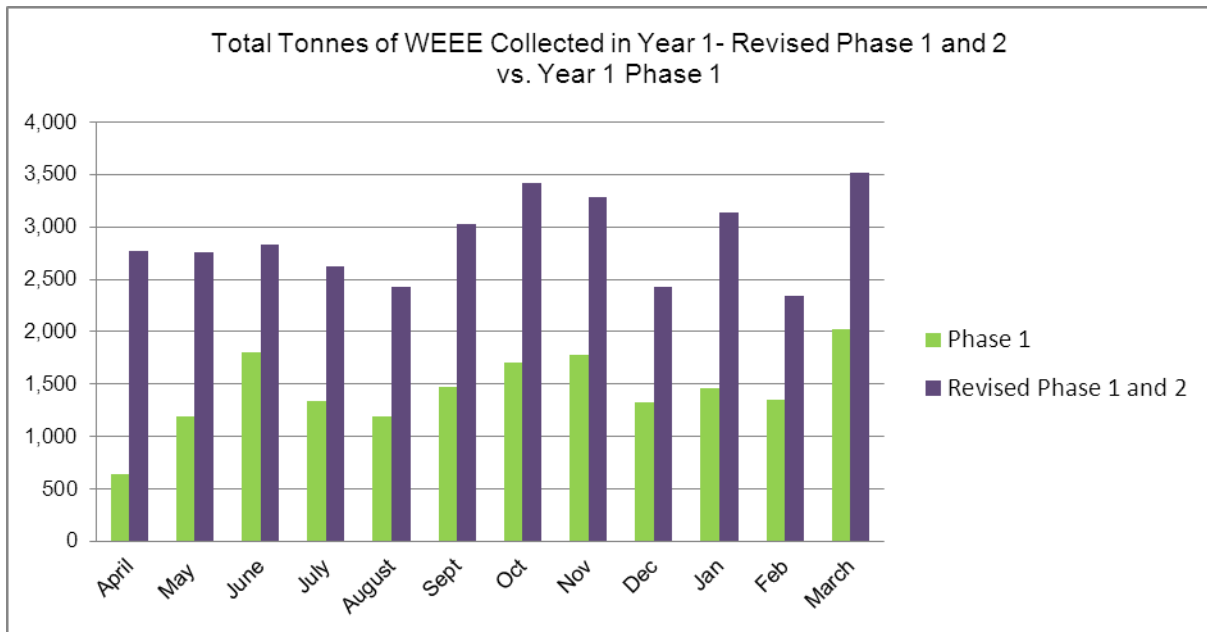


Table 9 – Total WEEE Collected in Year 1 Revised Phase 1 and 2

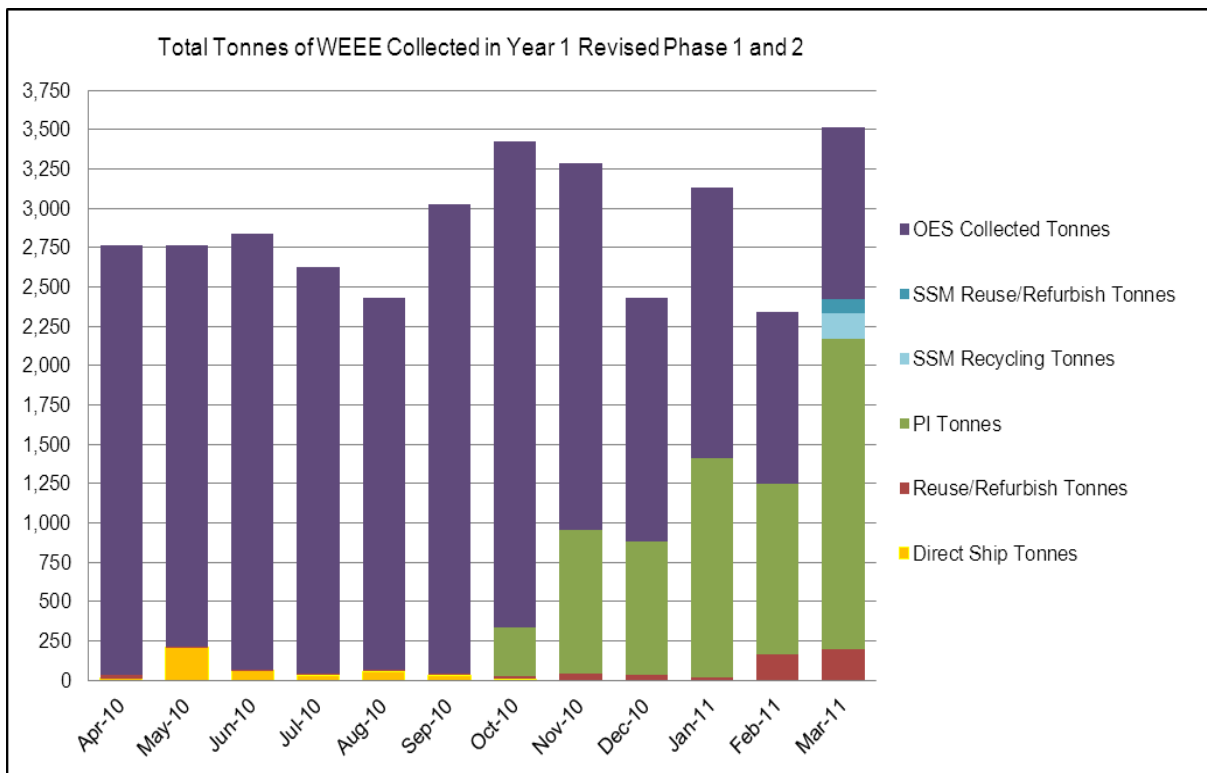


Table 10 – Year 1- Revised Phase 1 and 2 Collection Rates and Targets

WEEE Revised Phase 1 and 2 - Year 1 (April 1, 2010 – March 31, 2011)				
Year 1 Available for Collection		Collection Targets		
Material category	Revised Phase 1 and 2 (tonnes)	Actual Year 1 (tonnes)	Revised Phase 1 and 2 (tonnes)	Performance
Display Devices	41,751	19,332	25,060	77%
Desktop and Portable Computers	11,758	4,061	7,092	57%
Printers and Peripherals	42,695	10,012	14,027	71%
Floor-Standing Printing/Copying Devices	637	1,180	439	269%
Total	96,841	34,585	46,617	74%

Table 11 – Year 1 - Revised Phase 1 and 2 Program Results and Targets

Indicators	OES Results	Revised Phase 1 and 2 Targets	Performance
Collection Tonnage	34,585 ¹²	46,617	74%
Collection Kg/Capita	2.62	3.55	74%
Recycling Tonnage	28,304 ¹³	37,294	76%
Recycling Kg/Capita	2.56	2.14	75%

4.3 Recycling Performance

Building on the results of the first year of the program, OES committed to a series of proposed enhancements to the program including the continuation of the direct ship program, introduction of the Processor Incentive model, greater focus on round-up activities and increased collection incentive rates; all of which were designed to increase the program’s recycling performance.

After presenting stakeholders with various continuous improvement options, OES decided to implement the PI model based on a tiered recycling efficiency rate calculation. Under this arrangement, the PI payment available would be established based on recycling rate performance by major material category.

¹² This figure represents the total recycled tonnage (calculated by applying the recycling efficiency rate to materials collected)

¹³ This total does not include the tonnage under the Reuse/Refurbishment program.

This model did not disturb the relationship between OES and existing approved collection sites and was a supplement to the material allocation RFP. PI was meant to create an incentive for OES Processors to source WEEE from their clients or Generators, while the tiered processing incentive was meant to create a financial incentive for continual improvements in recycling efficiency and individual recycling performance.

There are four distinct material categories and respective incentive payment levels for eligible Program Phase 1 and 2 WEEE materials in the table below. Eligible materials refer to WEEE that is supplied for use in Ontario and is obligated as per the Phase 1 and 2 Program Plan. Non-program material includes products that are used outside of Ontario and transported into the province for recycling or refurbishment. Each material category has two distinct payment levels based on a range of recycling efficiency rates.

Table 12 - Processor Incentive Levels and Rates

Material Categories	Level 1		Level 2		Collection/Transport Incentives	
	Recycling Efficiency Rate	\$/Tonne	Recycling Efficiency Rate	\$/Tonne	Southern Ontario	Northern Ontario
Display Devices ¹⁴	50% to 75%	\$650	>75%	\$850	\$150	\$200
Desktop & Portable Computers ¹⁵	60% to 85%	\$450	>85%	\$650	\$150	\$200
Other Program WEEE ¹⁶	60% to 85%	\$550	>85%	\$750	\$150	\$200
Floor Standing Copiers & Printers ¹⁷	60% to 85%	\$550	>85%	\$750	\$150	\$200

At the start of the PI program while recycling efficiency rate calculations were being finalized the OES Processors were paid based on the lowest incentive level. Once the proper level of incentive was determined all eligible Processors received retroactive payments based on their efficiency incentive level.

The recycling efficiency rates were calculated for the PI by OES with the assistance of a third party auditor retained by OES. In order to ensure that the recycling efficiency rate was determined in a fair and accurate manner, the auditor conducted on-site audits of each Processor’s facility and engaged with their downstream processors as necessary to calculate the Processor’s recycling efficiency rate. This process was developed with review and oversight by WDO staff.

During the first six months of the PI program, Processors were actively registering their clients (Generators) with OES. A total of 2,347 Generator sites were added under the PI program; this included 40 OES collection sites that have ended their agreements with OES and moved to work directly with OES Processors. The PI program collected and recycled a total of 6,201 tonnes of eligible WEEE. From this volume, 64% has been determined to be “net new” tonnes of EOL electronics while 34% of volume has been transferred from the OES collection network into the PI program.

¹⁴ Display devices capture TVs, CRT, Plasma, Flat Screen, Monitors, and All-in-one computers.

¹⁵ Desktop and Portable computers are captured in this category.

¹⁶ This category captures all designated computer peripherals, image, audio and video devices, home theatre in a box, telephones and telephone answering machines, cellular devices and pagers, aftermarket vehicle image audio and video devices, desktop printing, copying, and multi-functional devices.

¹⁷ This category captures floor standing printing, copying and multi-functional devices.

EOL electronics and its components can be both manually and mechanically separated into its constituent parts through a combination of various processes for the purpose of recycling. For example, ferrous and non-ferrous metals, glass and plastics are recovered using a variety of methods including smelting, crushing and mechanical sorting, grinding and pelletizing for further processing into commodities and new products. Due to the complexity of components as well as age and design differences, the percentage of materials that can be recovered will vary. Table 20 below summarizes end market uses and recyclability of WEEE by each sub-component. For the purposes of this table, “recycling” refers to material that is diverted for end-of-life processing. Material that is collected, but not recycled, includes materials that are landfilled (e.g. treated wood from console televisions), recovered in slag but not used for another purpose (i.e. landfilled) and organic materials that are lost in the smelting process (e.g. plastics in cables that are consumed as energy when the metal is recovered).

Table 13 – End Market Uses and Recyclability of WEEE by Material Type

Material	End Market Uses	Recycled	Process Location
Ferrous metals (Aluminum, Copper)	Metal Recovery i.e. ground and smelted, material used in re-manufacturing	Yes	Canada, Ontario, USA, Europe.
Other precious metals	Metal Recovery i.e. Smelting material used in re-manufacturing	Yes, precious metals found on circuit boards. Other components of the boards are consumed in smelting process.	Canada, Ontario, USA, Europe.
Cables and wires	Metal Recovery i.e. Smelting material used in re-manufacturing	Yes, metal, plastics are often removed mechanically and landfilled or burned off in the copper recovery process.	Canada, Ontario, USA, Europe.
High & low grade circuit boards and other electronic components	Metal Recovery i.e. Smelting material used in re-manufacturing	Yes, for the precious metals found on circuit boards. Other components of the boards are consumed in smelting process	USA and Europe and Canada.
Glass (non hazardous)	Glass to glass applications as feedstock	Yes, in glass to glass applications. No when glass sent to lead smelters as it is disposed as slag.	Canada, USA, and OECD country.
Cathode Ray Tubes (CRT), frit, leaded plasma display or other leaded glass	Metal recovery	Yes. Separation of lead from glass.	Canada, USA, and OECD country.
CRT Phosphor powder	Hazardous waste disposal such as incineration	No. Material is currently being incinerated.	Canada, USA, and OECD country.
Separated plastics	Other plastics applications such as pelletizing, plastic product feedstock	Yes. Clean and sort by plastic type (resin code).	USA, Ontario, non-OECD ²

Material	End Market Uses	Recycled	Process Location
Ethylene glycol in CRT projection tubes	Hazardous waste disposal such as incineration	No. Material is currently being incinerated.	Ontario, Canada, USA
Mixed plastics	Pelletizing, plastic product feedstock, energy recovery (which does not count towards recovery)	No. Consumed in smelting process.	USA, Ontario, non-OECD ¹⁸
Mercury bearing lamps	Mercury recovery-distilled	Yes	USA
Non rechargeable batteries	Metal Recovery i.e. Smelting material used in re-manufacturing	Yes	Ontario, Elsewhere in Canada, USA
Rechargeable batteries	Metal Recovery-Lithium, Nickel Cadmium - smelting	Yes	Elsewhere in Canada, Ontario, USA, Europe
Ink and Toner	Material recovery as energy (not counted towards recycling) Metal recovery, plastic product feedstock	No – incineration Cartridges may be mechanically processed to prepare cartridge material for recycling.	USA Ontario
Wood	Landfilled Biomass (not counted towards recycling)	No	Ontario, Canada

4.4 Total Volume Recycled

During the second year of the program, OES surpassed the recycling efficiency rate target of 77.5% set out in the Revised (Phase 1 and 2) WEEE Program Plan. The overall weighted recycling rate of EOL electronics was 84% across all material categories. Display devices and floor standing printers and copier devices were recycled at a rate of 82%, while desktop and portable computers were recycled at 87% and peripherals and printers at 86%. The program recycling rate of 84% represents a 3% growth from the Phase 1 program diverting 28,304 tonnes of recycled EOL electronics.

This increase in recycling performance can be attributed to two primary factors:

- 1) Investment by some Processors and downstream vendors to improve the recycling of plastics from electronic products.
- 2) Greater use of downstream markets for cathode ray tubes (CRT) that recycle glass at higher percentages.

Table 14 summarizes 12 months of recycling performance and recycling efficiency rate against targets set out in the Revised (Phase 1 and 2) WEEE Program Plan. During the first year of the

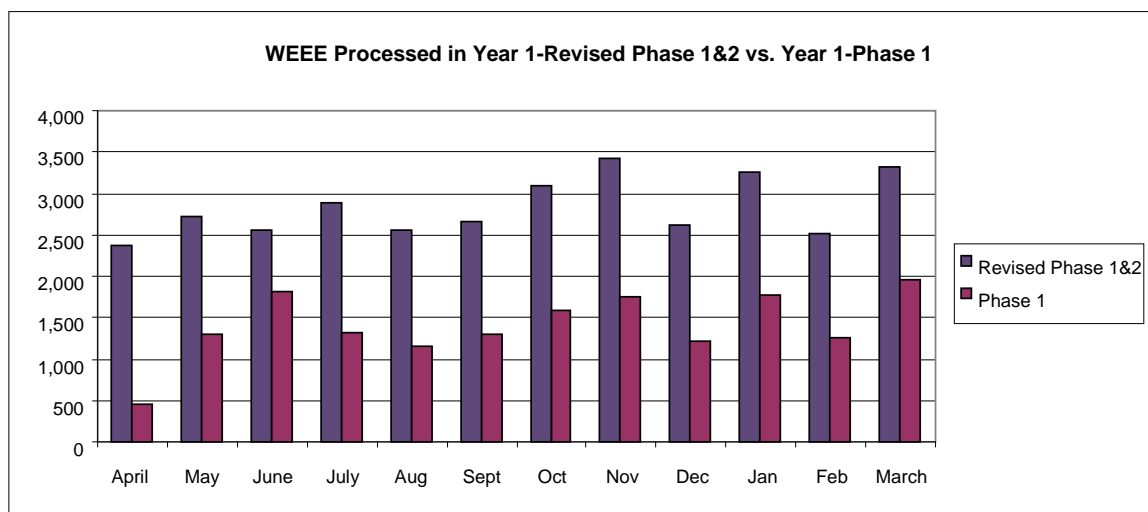
¹⁸ Under the ACES WEEE program the downstream processors of an OES approved primary processors were located in non-OECD countries and assurances are required to confirm that the plastic computer commodity is not going to be used in food or toy applications as per the ERS. Letters of assurances were received for each company under the ACES program; OES accepted these results as part of the audit sharing protocol.

revised program OES doubled the recycled tonnage reported in Phase 1, an additional 16,658 tonnes were recycled in the second year of the program. This represents a 57% increase over year 1.

Table 14 – Year 1 – Revised Phase 1 and 2 Recycling Performance and Targets

EEE Product	Actual WEEE Sent to Processors (Tonnes)	Recycling Efficiency Rate	Total Recycled	Revised Phase 1 and 2 Target (Tonnes)	Recycling Performance
Display Devices	19,050	82%	15,671	20,048	78%
Desktop and Portable Computers	3,183	87%	2,754	5,673	49%
Printers and Peripherals	10,840	86%	9,244	11,222	82%
Floor-Standing Printing/Copying Devices	773	82%	635	351	181%
Total	33,847	84%	28,304	37,294	76%

Table 15- Comparison of WEEE Processed during Year 1 -Revised Phase 1 and 2 vs. Year 1 Phase 1



4.5 Reuse and Refurbishment Performance

There is an established and mature reuse and refurbishment (R&R) sector operating in Ontario ranging from large to small and private companies to not-for-profit (NFP) organizations handling, testing, refurbishing and reselling large volumes of WEEE, primarily office related information technology (IT) equipment such as desktop and laptop computers and computer monitors. Most computer stores across Ontario, both large and small, sell refurbished or used equipment.

Also, most original equipment manufacturers (OEMs) have commercial reuse and refurbishment activities within their businesses. Most electronic and information technology (IT) equipment that has economic value after its first useful life or after the lease ends will be resold or redistributed.

commercially and often informally (e.g. a television that cascades to different users within or outside the home). In addition, the established NFP community in Ontario welcomes functioning equipment for resale (to raise funds) or redistribution to other needy individuals and organizations in their community and beyond. Therefore extending the useful life of electronic and IT equipment through resale or redistribution takes place extensively throughout Ontario.

In the second program year, OES continued to face the challenge of capturing data and information pertaining to the quantity of equipment diverted or extended through reuse activities. The amount of Phase 1 and 2 EEE being reused in Ontario is much higher than OES has been able to measure and track as many organizations are reluctant to divulge information until they are part of the program. In addition commercial reuse activities are outside of the OES involvement.

In response to this challenge, OES introduced the Reuse Incentive (RI) Program which provides a financial incentive to approved R&R organizations to encourage reporting on reuse activity. A network of 16 Reuse/Refurbishment sites has joined the RI program and report data on a monthly basis.

Table 16 summarizes the number of reuse/refurbishment organizations, sites and locations, and their approval status as of the end of March 31, 2011.

Table 16 – Summary of Reuse/Refurbishment Sites added April 1, 2010- March 31, 2011

Status	Sites Number	Locations	Total Approved Reuse/Refurbishment Sites
Approved	7	Ottawa, Kitchener, Markham, Toronto, Brockville, Markham, Brampton	16
In process	12	Mississauga (3) Toronto(3), Scarborough Brampton, Embrun St. Catharines, Hamilton, Guelph	Pending

Of the 16 OES approved R&R sites, 12 are for-profit companies and 4 are non-profit organizations. The 4 non-profit groups are CompuCorp, Goodwill, CyberEquality/Free Geek Toronto, and The Working Centre, all of whom entered the application process after OES agreed to pay the audit costs.

Reuse Incentive Program

In conjunction with the PI program, OES introduced a Reuse Incentive (RI) program in October 2010. The RI program (RI) includes a combined reuse incentive of \$2.00 described in the table below to offset the administration costs associated with reporting and to provide an incentive for Approved Reuse and Refurbish (R&R) Organizations to provide data on their reuse activities to OES.

The introduction proved to be an effective tool in encouraging approved reuse and refurbishment sites to regularly report their data into the OES program. Most notably, OES observed a 191% increase in reported reuse tonnage over 2010. In total the program paid out nearly \$117,000 to reuse/refurbishment sites.

Table 17– Reuse Incentive Rates

RI Activity	Incentive Rate
Reuse/Refurbishment of whole working unit ¹⁹	\$1.75
Reporting incentive	\$0.25

To be eligible for the RI, Approved R&R Organizations must:

- Meet the reporting obligations set out in the Reuse and Refurbishment Standard (monthly reporting) including providing the source and destination of the reused items so that OES can conform with its obligation to track program materials from collection to final disposition; and
- Enter into a Reuse and Refurbishment Agreement with OES which was introduced in the second year of the program.

Table 18 summarizes the initial data on reuse of WEEE provided by 14 of the 16 organizations. Out of the 14 organizations who reported data, only 12 are actively reporting on a monthly basis. The data reported includes weight, OEM serial number, invoice number and end use destination of whole units that were redistributed as whole units or as reusable parts.

Table 18 – April 1, 2010- March 31, 2010 Reused/Refurbished Materials against Targets

Product	12 Month Actual (kg)	12 Month Revised (Phase 1 and 2) Target (kg)	Performance
Display Devices	152,044	1,237,000	12.0%
Desktop Computers	344,191	3,385,000	10%
Portable Computers	29,849	1,024,000	3%
Computer Peripherals	88,539	39,000	227%
Printing Copying and Multi-Function Devices	6,087	1,177,000	0.5%
Telephones and Telephone Answering Machines	25	1,706,000	0%
Cellular Devices and Pagers ^[1]	5,507	233,000	2%
Audio, Video, and Imaging Equipment	110	377,000	0%
Total	626,351	9,178,000	7%

OES, in cooperation with a working group of the OES Stakeholder Forum, examined the feasibility of creating a combined Reuse/Refurbishing and Electronic Recycling Standard and

¹⁹ The combined \$2 per whole working unit incentive is available for whole working computers, monitors, printers, copiers, scanners, televisions and fax machines

decided that the best approach was to streamline the audit procedures for approved R&R firms who wish to become approved Primary Processors and vice versa.

Table 19 - Year 2 Reuse/Refurbishment Target Challenges

Potential Reasons Why R&R Targets Were Not Achieved in Year 2	Steps OES is Taking to Mitigate Issue
Unapproved R&R sites continue to operate in the market	OES was active in outreaching and awareness building during the second year of the program.
Illegal flow of WEEE to Third World remains greatest concern to OES	OES has asked MOE to raise this with Environment Canada regarding illegal exports from Ontario.
High price of commodities including precious metals	Metals including gold and copper experienced some of the highest world prices ever in 2010 and continue to rise. This is an economic incentive for non-approved organizations and processors to operate outside of the program.
Reporting deficiencies by approved sites	Reuse Incentive (RI): Financial incentive to report was introduced in October 2010 and has resulted in increased reuse tonnage reported to OES by RR organizations. However certain organizations continue to report in an irregular manner.
OEM Activities outside of program	OES is currently looking into necessary steps to encourage OEM's to participate in the reuse program

4.6 R&D and Market Development

During the first year of the Revised Phase 1 and 2 program, OES conducted research and development (R&D) activities to support and increase the effectiveness and efficiency of WEEE collection. OES set out both material-specific and common priorities for R&D which are outlined in the table below.

Table 20 – Common Cost R&D and Activities

Common Cost R&D	OES Activities
The development of activity-based costing methodologies at collection sites. The 2010 objective included the expanded range of materials.	AECOM Consultants have completed the collection incentive study. The study concluded that the system is underutilized and that overcapacity in the existing collection system results in lower cost efficiency. The lack of consistent flows of material at the audited sites also made it impossible to complete accurate time and motion studies. A presentation by AECOM for OES and WDO staff took place on October 18, 2010. At their November 23 rd meeting, the OES Board of Directors decided, based on the study conclusions stated above, that the current incentive rates for OES Collectors are adequate and will, therefore, remain the same. This was communicated to OES collectors via the Bits & Bytes newsletter in December and again in a webinar for Collectors held in January 2011.
The investigation of the feasibility of adopting	In response to challenges experienced by some

Common Cost R&D	OES Activities
<p>a reusable container and pallet system to improve the efficiency and effectiveness of collection, transportation, and consolidation.</p>	<p>municipalities with the OES requirement to sort and package collected WEEE on pallets and Gaylord boxes, OES agreed to initiate research and development activities on best practices to allow municipalities to utilize roll-off containers for the collection of mixed WEEE at collection sites and events. The pilot ran in four municipalities and worked with three special event locations to determine possible concerns with increased breakage of monitors and televisions. An RFP was issued to develop a network of service providers and repacking facilities.</p> <p>The municipal roll-off program was announced at the 2010 Municipal Waste Association Spring Workshop and at the AMO Annual Conference in August. OES has added 57 Collection sites (representing 31 municipalities) to an additional 21 municipal sites which were active in the program prior to April 2010 (pilot). This amounts to a current total of 78 OES collection sites using roll-offs: 12 Central, 21 East, 26 North, and 19 West.</p> <p>Five OES Processors have made their facilities accessible to deliveries of WEEE contained in roll-offs. Please note that volume directed to them by OES is within the RFP allocation process.</p> <p>As a result of these initiatives OES increased both accessibility and volume collected.</p>
<p>Audits of collected WEEE to determine composition of returned material.</p>	<p>Composition sampling of collected material was conducted. The purpose of the sampling was to measure the composition of the three streams of collected material to determine the relative percentage of material categories collected.</p>
<p>Conduct a design for environment study to assess opportunities to encourage reduction.</p>	<p>EPSC has prepared a design for environment study in 2011. Please see Appendix 6 for the full report.</p>
<p>RFP Recycling Efficiency Rate calculation and Study</p>	<p>As part of the RFP process to select Processors for recycling, OES retained the services of external audit experts to assist in the RFP and PI process by calculating Recycling Rate Efficiency rates for each Processor.</p> <p>As part of the approval of the PI and RI programs, WDO directed OES to implement an independent study of reuse and recycling costs to assess whether the RI and PI are appropriate. Feedback from Processors is that the PI study should focus less on processors' costs, revenue from commodities, and so forth, and focus more on where and why leakage (e.g. companies that are collecting and processing outside the OES network) is occurring. OES is still considering which direction it will take. Based on the results of this study, the RI and PI</p>

Common Cost R&D	OES Activities
	may be adjusted retroactively to the commencement date of the incentive program (October 4, 2010).

In addition to the common research and development activities, R&D expenditures were to address material-specific WEEE groups.

Table 21 – Material-Specific R&D

Material-Specific R&D	OES Activities
<p>A pilot project to assess options for collecting large televisions such as rear-projection or old television consoles. OES will select communities in Ontario and test various incentives to increase the collection of televisions from residents.</p> <p>2010 objective: To extend this project to municipal and social non-profit organizations to increase the collection of TVs from residents.</p>	<p>Sears Canada extended the Home Delivery Pilot program which offered a WEEE collection service to customers who are having appliances, mattresses or furniture delivered to their homes in south-western Ontario. The original study was considered too short to provide accurate results. The extension allowed Sears Canada to train its employees to consistently offer the service to clients with each sale. The extension of the original pilot is complete. A draft report has been delivered to OES and a presentation is pending.</p>

Funding of and investment in R&D will continue in the second year of the Revised Phase 1 and 2 program focusing on accessibility, collection and diversion targets as well as program cost-effectiveness.

5.0 Design for the Environment Initiatives

OES will report on OES stewards' activities on design for the environment initiatives through Electronic Product Stewardship Canada (EPSC) 2011 [Design for Environment \(DfE\) Report](#) authored by the Green Electronics Council.

6.0 Promotion & Education Summary

Since the launch of the program in April of 2009, OES initiated province-wide promotion and education to launch the program, and encourage Ontarians to divert waste electronics from landfill into safe and responsible reuse and recycling.

The primary objective for the inaugural public relations and mass-media campaign which began in April and May of 2009 was to:

1. Raise awareness of the program, outline accepted Phase 1 materials, and;
2. Provide Ontarians with the immediate ability to recycle electronic waste by directing them to a searchable website.

OES committed to a P&E budget increase for paid (e.g. advertising) and earned (e.g. public relations) media during the program year to allow for a TV buy, and a 14-city mobile recycling tour across Ontario; both to help elevate awareness of the program. The budget increase allowed

OES to meet minimum threshold spending, achieve more reach and frequency of messages to the general public.

Midway through the program year, OES split away from shared ownership of the “dowhatyoucan.ca” website with Stewardship Ontario, to its own, “recycleyourelectronics.ca”.

During the latter half of the program year, OES adjusted its audience investments to include business/IC&I.

OES also invested in a co-op marketing program to support OES collectors’ local efforts throughout the province.

5.1 Awareness and Research

- March 2010: Ipsos-Reid conducted public opinion research to: evaluate WEEE recycling behaviours and attitudes in Ontario; measure brand awareness, and; test recall of advertising campaigns after one full year of operating the WEEE program. Survey results indicated:
 - Ontarians are pre-disposed to recycle in general, actively do so, and are supportive of WEEE recycling opportunities.
 - Awareness of the operating entity, OES, and its Do What You Can dowhatyoucan.ca website, and advertising campaigns were not surprisingly low, given the operating entity, OES – a start-up—was the brand used to promote awareness of the program. Another reason for low awareness is attributed to inconsistent market presence; at launch and last quarter of the program year.
 - When respondents did see OES and Do What You Can advertising, many took action to find an approved collector or learn more about WEEE.
- March 2011: OES initiated and completed foundational consumer research to serve as the basis for directing the development of the P&E strategic framework for its next program year.

5.2 Consumer Focus

- Launched mass awareness campaigns; with initial audience targets: consumers 35+ and youth.
- Initiated paid and earned media opportunities.
- Participated as an exhibitor at consumer events and shows.

5.3 Consumer Campaign

- Prior to launch of Phase 2: OES held a press conference to announce new products accepted by the program and increase awareness of OES and messaging. The story was covered by every tier one TV network in Ontario, and 11 outlets attended the press conference.
 - Total media impressions: 10.6 million (100% positive/balanced)
 - 78% of media stories included call to action for OES program
 - Awareness increased through coverage generated by combined mainstream, ethnic, French language and technology media outlets

- May 2010: OES launched an advertising campaign focused on home and cottage spring cleaning which included a province-wide media buy over a 6.5 week period (billboards, posters, magazine ads, online video ads, digital in-store ads, newspaper insertion, radio ads, and full-page newspaper ads).
- September 2010: OES developed a TV commercial to tell the story of safe e-waste recycling and direct visitors to the *recycleyourelectronics.ca* website. TV ads began to air on September 27, 2010 for two weeks, then again after Boxing Day for another two weeks.
- Summer and Fall 2010: Mobile electronics recycling centre hosted collection events on a cross-Ontario tour, spending 72 days on the road covering nearly 4,000 kilometres and seeing a grand total of 7,505 vehicles in 14 cities, collecting approximately 333 tonnes
 - Earned media impressions = 4,840,482 (100% positive/balanced).
- September 2010-March 2011: OES developed an integrated advertising campaign—"Do The World A Favour" messaging—print, newspaper/magazine, TV, radio, online (including Facebook engagement ads), cinema and elevator exposure as well as outdoor digital and indoor mall posters (Consumer, Youth, Business audience targeted messaging).
 - Achieved over 212 million impressions (a 10% increase in actual impressions vs. planned) for October through February.
 - October - March actual impressions = 219,942,130 (versus planned impressions of 200,246,499)
- Holiday 2010: Deployed 'shop and drop' ad messaging strategy direct to consumer via retail (included in-store digital POS, retailer online and radio); resulted in retail take back increases in shopping period as reported by some retail collectors.
- Participated as an exhibitor at consumer trade shows, including Fall Home Show, and Green Living Show (Toronto) alongside Stewardship Ontario and Ontario Tire Stewardship, touching 3,000 attendees.
- Developed and distributed proactive pitches and press releases to secure earned media coverage in 2010 / 2011 (ongoing), resulting in:
 - A total of 2,056,074 media impressions (100% positive/neutral)
 Proactive releases included:
 - Holiday / Boxing Day (Dec. 2010)
 - Super Bowl (Feb. 2011)
- Conducted social and traditional media audit of conversation and coverage landscape to assess potential opportunities for social media marketing. The findings concluded OES could initiate blogs and Twitter. A Twitter account was established in late March 2011 under the username "ecycleOntario".
- Executed "Break Up With Your Stuff", a creative consumer PR campaign – timed for Spring/Earth Day, and leveraging TV personality and professional organizer Hellen Buttigieg, - to drive awareness of the importance of the recycling of unwanted electronics. Results included:
 - A total of 2,688,231 media impressions
 - 16 print, broadcast and online stories, including the National Post and 24 Hours
- Conducted a successful March 2011 stakeholder/media tour with Carol Hochu in Windsor, London and Kingston. Results included:

- 11 media stories in print and broadcast outlets (exceeding original estimate of 2 interviews per location), including the Windsor Star and Kingston Whig-Standard, resulting in 654,549 media impressions
 - A total of 17 members from various local collectors attended the sessions. City Mayor Joe Fontana participated in the photo opportunity in London alongside City Councilor Harold Usher
- Drafted and submitted several matte stories for publication across Ontario, starting in March, to coincide with Spring Cleaning/Earth Day. Results to date:
 - 2,808,561 impressions (exceeding target of 1,000,000) and 53 placements in community newspapers such as The Hamilton Spectator, The Sudbury Star and The Sault Star

5.4 Business Focus

- Launch a “mass inform and educate” strategy, targeting businesses; with initial industry vertical targets: property management, retail, schools, and hospitals.
- Initiate paid and earned media opportunities.
- Participated as an exhibitor at business and industry trade shows.

5.5 Business Campaign

- A Business to Business (B2B) mass campaign was launched in Q3 of the program year to deliver a message of recycling in a safe, secure manner for all materials. It included an integrated business campaign including print, radio, online, posters and direct marketing:
- November-March: Series of ads targeting business and office electronics were placed in newspaper, magazine and online properties with a business@recycleyourelectronics.ca email address set up to track response
- Radio spot developed to direct listeners to the RYE website
- Custom business splash page launched on RYE website
- Deployed digital advertising in office buildings in Toronto and Ottawa via Elevator News Network
- Out of Home (OOH) signage at Porter Airlines lounge and on GO-trains across the GTA
- February-March: Direct marketing via free-standing insert (FSI) to IC&I sector with a “request for contact” form to business@ontarioelectronicstewardship.ca to distinguish response from the FSI activity from the advertising; included a survey that resulted in a business white paper back to those requesting it. The FSI achieved impressive results that included (as measured on March 14, 2011 when the survey was closed):
 - 1,642 visits to survey landing page, which exceeded target of 357 visits by 460%
 - 446 completed surveys to exceed target of 89 completed surveys by 501%
 - 701 visits to www.recycleyourelectronics.ca to exceed target of 143 visits by 490%
- 186 requests for contact with OES (up to March 31, 2011) on queries about how to join the OES network; how to host an IC&I collection; what materials are accepted under this program, and nearly 80% of enquiries requesting pickup or delivery.

- Pitched and secured six editorial placements for by-lined articles, under Carol Hochu, in business trade publications, resulting in 1,624,865 media impressions. Outlets include:
 - Toronto Star insert on Greening Business
 - Recycling Product News
 - CanadaOne.com
 - Canadian Facility Management & Design
 - GreenAdvisor.com
 - Canadian Property Management

5.6 Youth Focus

- Designed to reach out to youth 16-25 to act on outdated equipment. The campaign included the use of mall posters, interior transit cards on buses, online media, as well as posters and digital screens on post secondary campuses.

5.7 Events

- OES directed approximately \$109,000 to targeted event marketing support in Program Year 2, taking part in events—awareness and/or collection—to a variety of audiences that included speaking engagements for Carol Hochu, OES Executive Director, and:
 - Industry: Municipal Waste Association (MWA) annual conference and workshop, Association of Municipalities of Ontario (AMO) annual conference, NAID conference, Ontario Recycler Workshop
 - Consumer: Fall Home Show, Green Lifestyle & Home Show, Green Living Show, Green Expo
 - Youth: “Beat the Peak”, partnered with Toronto Hydro presenting to 26 schools and college/university campuses in Toronto
 - Business: Small Business Forum, Property Management Expo, Brookfield, Wal-Mart
- During these events nearly 5,000 touches were recorded and over 4,000 surveys asking what people do with their end-of-life electronics were collected.
- 47 “Round up” collection events were also carried out supported by promotional and educational materials and \$89,800 in advertising.

5.8 Branded Giveaways

Branded merchandise items (OES and recycleyourelectronics.ca) were made available as giveaways at events and shows, acted as recalls/reminders of the OES WEEE program. This included: 144 aprons and 250 pairs gloves for workers and 2,000 mugs and 5,000 key chains for attendees at the E-Drive events, as well as 2,500 USB keys at tradeshow and corporate engagements, and 10,000 recycled product pens at all events.

5.9 New Website

Website traffic on www.dowhatyoucan.ca (launched April 2009) remained strong throughout the first quarter of the second OES program year with 82,914 visits.

Visits to the web (dwyc.ca) for April through September was 152,964 visits with a solid in-market ad presence for 17 of 26 weeks based on a media spend of \$1.7 million.

OES moved away from the DWYC branding jointly with Stewardship Ontario, and moved to Recycle Your Electronics.ca (RYE), which included a new logo and tagline. The RYE URL (www.recycleyourelectronics.ca) was put in place in September 2010. Visits to this new website are tracking at 144,122 visits for Sept 27, 2010 through March 31, 2011, with an in-market presence for 16 of the 28 weeks in this fiscal period²⁰.

OES also launched a splash page in reycleyourelectronics.ca with a distinct point of entry for households and offices, with more business-relevant content in development for the next program year.

After making the decision to rebrand itself in the fall of 2010, OES initiated brand identity guidelines for use of RYE URL logo that November and continues to work on a more robust set of guidelines for Stakeholders, Affiliates and others.

5.10 Stakeholder Communications

- Marketing resources (print ads and posters, media advisories and releases, privacy caution posters, etc.) were developed for OES stakeholders in English and French, in hard copy and online, to promote local collection events.
- OES distributed collector kits and other program resource materials to program stakeholders through its Direct Marketing program.
- OES rolled out a co-funding program to support OES collectors that promote local events and sites and provided approximately \$17,000 in partner marketing funding through this program. Using learnings from this program, planned roll out of new P&E Incentive program as successor to co-funding.
- Published 35 Bits and Bytes e-news on topics of concern to Stakeholders.
- Established new online data management system to track newsletter/invitation uptake and to provide essential information to ensure that key program information is successfully conveyed to program stakeholders for targeted communications.
- Published special Bits and Bytes supplement in mid December, to celebrate end of year (2010 calendar year) program highlights.
- Continued to expand and provide value-added content for stakeholders at www.ontarioelectronicstewardship.ca throughout program year 2; attracted over 100,000 visits from April 2010 to March 2011, a 50% increase in traffic from Program Year 1²¹.
- Initiated process to refresh content and visuals for ontarioelectronicstewardship.ca
- Developed "[OES in the News](#)" page to highlight positive OES media stories.
- Launched regularly-held Stakeholder Forum meetings to provide communications updates to and solicit feedback from Collectors/Processors and to understand their business needs.
 - Developed online message board for targeted communications and online discussion among members
 - Hosted seven meetings averaging more than 20 stakeholder participants at each session

²⁰ During this time, OES also drove traffic to business@ontarioelectronics.ca and recycleyourelectronics.ca (office section)

²¹ Approximate number of visits reflects period of time in Year 1 when web stats were not fully available

- Initiated discussion of “service provider” and “affiliate” designations as preparation for developing co-branded communications materials.
- Hosted information and consultation sessions:
 - Information sessions for service providers hosted on January 11 and 12, 2011, which attracted approximately 130 participants
 - Webcast on steward fee setting and program update, held on February 23 for approximately 125 live participants
 - Webinar on material flow, which was held on May 26, 2010, attracting approximately 135 participants

5.11 Partner Focus

- Completed OES and third party ‘co-branded guidelines for partner use
- Third Party: Partnered with Toronto Hydro on their “Beat the Peak” initiative – October-November 2010.
- Retail: Developed *Environmental Handling Fees* (EHF) brochures for retail partners
 - Direct-distributed 110,000 English and 520 French brochures to 736 stores
 - Logged 677 brochure views (and assumed downloads) at www.ontarioelectronicstewardship.ca
- City of Barrie and Halton Region: Initiated pilot magnetic signage for municipal roll-off bins
- City of Ottawa: curbside sticker program providing 5,000 stickers in support electronics diversion
- City of Toronto: curbside e-waste bags, as well as pickup truck signage.

5.12 Promotion & Education Budget

The program year 2 budget for Promotion & Education (P&E) was infused in June, 2010 to enable a television buy to build broad-based awareness of the program; netting out with a forecast of \$6.1 million for external-facing P&E; including market research, but excluding program manager’s costs for labour and hard costs for web and event support, and stakeholder communications. Table 22 provides details below.

Table 22 – Year 1 Revised (Phase 1 and 2) Promotion and Education Budget

Promotion and Education Activities	Actual
Market & Promotional Research	\$213,053
Partner Marketing	\$17,109
Influencer Marketing (includes e-drive support and branded merchandise)	\$1,020,432
Communications Literature, Materials	\$57,716
Advertising Fees, Services & Production	\$803,287
Direct Marketing	\$36,824

Brand Management & Merchandise	\$23,910
P&E Miscellaneous (includes stakeholder communications)	\$483,913
Broadcast Advertising Media	\$3,926,598
Print Advertising Media	\$809,856
Digital Marketing	\$339,694
Web Marketing	\$51,585
Event Marketing	\$74,707
Total	\$7,858,684

6.0 Summary

While OES is pleased to have made significant progress in such a short period of time, we remain committed to continuous improvement. OES looks forward to ensuring that waste electronics in Ontario are managed in an environmentally responsible and economically efficient manner, and that our program continues to meet the high expectations of Ontarians.