

2010 Evaluation Report on the Minnesota Electronics Recycling Act



Legislative Charge

Minn. Stat. §§ 115A.1320 sub. 1(f) and (c)

On or before December 1, 2010, and each year thereafter, the agency shall provide a report to the governor and the Legislature on the implementation of sections 115A.1310 to 115A.1330. For each program year, the report must discuss the total weight of covered electronic devices recycled and a summary of information in the reports submitted by manufacturers and recyclers under section 115A.1316. The report must also discuss the various collection programs used by manufacturers to collect covered electronic devices; information regarding covered electronic devices that are being collected by persons other than registered manufacturers, collectors, and recyclers; and information about covered electronic devices, if any, being disposed of in landfills in this state. The report must include a description of enforcement actions under sections 115A.1310 to 115A.1330. The agency may include in its report other information received by the agency regarding the implementation of sections 115A.1312 to 115A.1330.

The agency is to annually review and if necessary, recommend changes to the value of the following variables that contribute to effective functioning of the Act: the proportion of sales of video display devices sold to households that manufacturers are required to recycle; the estimated per-pound price of recycling covered electronic devices sold to households; the base registration fee; and the multiplier established for the weight of covered electronic devices collected in section 115A.1314, subd. 1(d).

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Introduction

The Minnesota Electronics Recycling Act was enacted to address the increase in volume of waste electronics collected in Minnesota and the rising costs associated with that collection. The legislation was passed by the state Legislature and signed into law by Governor Tim Pawlenty in May 2007. The act became effective on July 1, 2007.

The MPCA's evaluation of the Act concludes that, despite the need for a few changes to improve the functioning of the Act, the law has met several of the desired outcomes. For example, the collection infrastructure has increased dramatically compared to what was in place prior to implementation of the law. The expanded collection infrastructure has resulted in a significant increase in the volume of waste electronics collected from households in Minnesota. Given the growth in the collection and recycling infrastructure in Minnesota, the law has contributed to expanded economic development activity in the state.

Process for completing the evaluation report

The MPCA conducted outreach to several key stakeholders to solicit feedback on the implementation of the Minnesota Electronics Recycling Act in preparation of this report.

The MPCA formally initiated the review of the Act with an event held on June 4, 2010, as part of the MPCA's Product Stewardship Speakers Series. Speakers included representatives from Best Buy, Waste Management Inc, MRM (Electronic Manufacturers Recycling Management Company) and St. Louis County.

MPCA staff met with the following organizations: Solid Waste Management Coordinating Board, Association of Minnesota Counties, Solid Waste Administrators Association; Northeast Waste Advisory Council, and the Household Hazardous Waste Regional Program Managers.

On its web site, the MPCA posted a page that described the content and objectives for the report as well as the process for submitting comments: www.pca.state.mn.us/electronics-report

Legislative charge

The contents of this report are determined by state statute, including recommendations for changes to the variables that contribute to effective functioning of the Act. [Minn. Stat. §§ 115A.1320 sub. 1(f) and (c)]

Overview of the Minnesota Electronics Recycling Act

The law is premised on a producer responsibility approach that engages the manufacturers of certain electronic products in the collection and recycling of waste electronics. By internalizing the costs of end-of-life management, this more economically efficient approach to collection and recycling takes steps towards incentivizing the manufacturers to implement design for environment practices such as design for recyclability and other techniques to reduce costs.

The Act establishes an obligation for manufacturers of video display devices (household televisions, monitors and laptops) to collect and recycle 80 percent by weight of their products sold in Minnesota.

To meet this recycling obligation, manufacturers are able to apply a broader range of products called covered electronic devices (CEDs) including computers and peripherals, printers, facsimile machines, DVD players, and video cassette recorders in addition to video display devices (VDDs) to meet their obligations. To encourage collection in Greater Minnesota, an additional 0.5 lb. credit is offered for CEDs collected in counties outside the 11-county metropolitan area (Anoka, Carver, Chisago, Dakota, Hennepin, Isanti, Ramsey, Scott, Sherburne, Washington, and Wright).

The law establishes responsibilities for the Minnesota Department of Revenue and the MPCA, the two state agencies charged with oversight duties. Manufacturers report to the Department of Revenue by September 1 of each year. The department then collects and reviews the data submitted: total weight of video display devices sold to households; the total weight of covered electronic devices collected from households that are recycled; and data on recycling credits.

The MPCA administers the Minnesota Electronics Recycling Act. Collectors and recyclers report and register with the MPCA by July 15 of each year and manufacturers register with the MPCA by September 1 of each year. The MPCA then collects and reviews the data submitted by collectors and recyclers on the total weight of CEDs collected and recycled; calculates estimated sales of video display devices sold to households by each manufacturer during the preceding program year, based on national sales data; and manages the electronic waste account that includes manufacturer base registration fees and recycling fees.

Program year comparison

A program year runs from July 1 through June 30 of the following year. The first program year was July 1, 2007, through June 30, 2008.

	PY1	PY2	PY3
Pounds recycled per capita (statewide)	6.5 lbs.	5.7 lbs.	6.2 lbs.
Pounds CEDs for recycling (actual)	33,600,000 lbs.	30,293,194 lbs.	33,082,679 lbs.
VDD sales	25,179,588 lbs.	30,975,240 lbs.	28,800,506 lbs.
Manufacturer Recycling obligation	15,107,752 lbs. (60 percent)	24,780,192 lbs. (80 percent)	23,040,404 lbs. (80 percent)
Pounds recycled by manufacturers	32.3 million lbs.	29,130,670 lbs.	33,317,557 lbs.
Manufacturer credits available	19 million lbs.	21,572,976 lbs.	31,271,506 lbs.

It is important to note that the volume reported by the collectors and recyclers will not necessarily equal the total volume reported by the manufacturers since all pounds collected and recycled may not be purchased by manufacturers.

Amendments enacted in 2009

In 2009, the Legislature enacted amendments to the Act to remove the retailer reporting requirement and address the use of recycling credits. The retail reporting provision was extremely challenging to implement and resulted in significant underreporting of video display device sales in the state.

The law now caps the amount of credits that can be applied to an annual obligation. A manufacturer may meet only 25 percent of their program year obligation through the use of recycling credits.

Role of local government

In keeping with the intention of the Act to provide a financing mechanism for waste electronics that does not rely on government funding, as well as to incentivize the expansion of collection opportunities for Minnesota residents, the Act does not impose any specific requirements on local government, such as a requirement to offer collection service.

Despite the intention of the Act, combined with several factors including the disposal ban on cathode-ray-tube-containing products that came into force on July 1, 2006, many local governments began offering collection to residents. As a result of the Act, many local governments, and county-operated programs in particular, were able to offer no-fee service to residents during the first year of the program. However, given the tremendous volume of material collected during the first program year, the difficulty of securing accurate sales data from several retailers, and the recessionary impacts on the global commodity markets, the financial picture for local government changed considerably for the second and third years of the program.

Statewide, reported collection by local government was 42.5% of the total pounds collected in program year 3. The share was higher in the metropolitan counties (46.7%) than in the non-metro (36.5%).

Local government sites are often locations where citizens can bring multiple products considered problem materials, such as paint, tires, oil and e-waste. A convenient “one stop shop” can help to ensure household products are being managed properly.

While the goal of the Minnesota Electronics Recycling Act is to reduce costs for consumer and local governments while expanding access to collection services, it is not premised on a mandated collection requirement for local government. If local governments choose to actively participate as a collector it is important to note that arrangements with recyclers and levels of reimbursement and/or payment may change.

Given that few other collection options may exist for residents, particularly in Greater Minnesota, the MPCA recognizes that local governments provide a necessary service, and collection of covered electronic devices can be integrated into other county solid waste and recycling activities.

The MPCA recommends the following considerations should be taken into account prior to a local government initiating or continuing collection activity:

1. A survey should be undertaken to ensure that adequate access to collection does not already exist in the jurisdiction. Alternatives to local-government-provided collection often include retailers, waste management companies and other entities.
2. If a local government does determine that government-sponsored collection is necessary, it should only be done if an agreement exists with a collector/recycler or manufacturer.
3. Finally, local governments that are low-volume collectors should work in regional partnership with other cities or counties to pool quantities of material.

Registered collectors

The following table illustrates the number of collectors registered with the MPCA at the conclusion of the program year including the number of permanent collection locations in Greater Minnesota.

Program Year	Registered Collectors	Collection Sites	Permanent Sites in Greater Minnesota
PY1	177	228	127
PY2	181	235	136
PY3	205	247	146
PY4	193	247	143

One notable enhancement of the collection infrastructure in Minnesota is the collection opportunities offered by electronics retailer Best Buy. Beginning in June 2008, the company began offering collection for covered electronic devices at 25 stores (19 in the Metropolitan Area and six in Greater Minnesota) and has emerged as the entity collecting the largest volume of household-generated waste electronics in the state. Best Buy accepts all brands and is currently charging \$10 to recycle televisions and monitors, but those customers receive a \$10 Best Buy gift card for future purchases.

The MPCA will continue outreach to other retailers that may be interested in offering collection opportunities for customers.

Collection in Greater Minnesota. To encourage collection activities in Greater Minnesota, the Act included a multiplier of an additional 0.5 pound to be applied to each pound collected outside of the 11-county metropolitan area (Anoka, Carver, Chisago, Dakota, Hennepin, Isanti, Ramsey, Scott, Sherburne, Washington and Wright).

Program Year	Registered Recyclers
PY1	55
PY2	50
PY3	60
PY4	64

Registered recyclers

The number of recyclers registered in Minnesota has increased during the course of the program, but annual reporting indicates that the majority of the recycling is done by a few processors. For example, analysis of program year three recycler reports indicates that the top ten recyclers account for 96 percent of the pounds recycled; the top three totaling 73 percent of all of the weight processed. (Registrations as of November 1, 2010.)

Recycling data

The weight collected for recycling during the three program years of the Minnesota Electronics Recycling Act clearly exceeds the expectations of almost all of the stakeholders who participated in the policy discussion leading to legislative action. The data, along with the willingness of Minnesotans to recycle if convenient collection options exist, challenge the assumption that recycling volume will decline after the initial years of a program. This is particularly notable given the transition to digital television that occurred in 2009 was expected to result in a short lived “bubble” of expanded recycling activity for cathode-ray-tube televisions.

The table presents the actual weight of recycled covered electronic devices collected from households in Minnesota for each program year.

Program Year	Total Weight Recycled (actual pounds)	Per Capita
PY1	33.6 million lbs.	6.5 lbs.
PY2	30,293,194 lbs.	5.73 lbs.
PY3	33,082,679 lbs.	6.24 lbs.

It is important to note that the law does not require recyclers to report the weight of recycled waste electronics by product type.

Thus, the MPCA is not able to determine, for instance, how much of the recycled weight was composed of televisions.

Reporting by manufacturers

Manufacturers report annually to the Minnesota Department of Revenue by September 1 on their sales of video display devices to households in Minnesota as well as the weight of covered electronic devices recycled. However, due to the proprietary nature of the data, the MPCA is provided with aggregate numbers and does not have access to individual manufacturer's reports.

Program Year	Reported Sales	Recycling Obligation	Obligation Share of Reported Sales
PY1	25,179,588 lbs.	15,107,752 lbs.	60%
PY2	30,975,240 lbs.	24,780,192 lbs.	80%
PY3	28,800,506 lbs.	23,040,404 lbs.	80%

The MPCA continues to monitor the weight of products placed on the market to assess the impact on current and future obligations for manufacturers. This is particularly important given the rate of technological changes inherent in this product sector and the trends towards lighter weight products.

Sales data estimates

As required by the Minnesota Electronics Recycling Act, the MPCA obtains pro-rated national sales data from the National Center for Electronics Recycling (NCER). These estimates of recycling obligation in Minnesota are based on national sales data and pro rated for Minnesota's population.

Program Year	Televisions	Computer Monitors	Laptop Computers	Total Obligation
PY1 (60%)	17,615,613 lbs.	2,359,572 lbs.	898,603 lbs.	20,873,788 lbs.
PY2 (80%)	20,532,778 lbs.	2,900,316 lbs.	1,389,983 lbs.	24,823,077 lbs.
PY3 (80%)	21,323,327 lbs.	2,390,414 lbs.	2,408,541 lbs.	26,122,282 lbs.

Registration fees

Manufacturers remit a registration fee each program year to the Minnesota Department of Revenue: \$1,250 for companies manufacturing fewer than 100 units per year for sale in Minnesota, \$2,500 for companies manufacturing 100 or more units per year for sale in the state. A program year runs from July 1 through June 30 of the following year.

Registration fees for the first program year were higher: \$5,000 (est. sales of 100+ VDD) and \$1,250 (less than 100 VDD).

Program Year	Registered Manufacturers	Total Registration Fees
PY1	79 (129 brands)	\$308,750
PY2	72 (129 brands)	\$151,250
PY3	71 (126 brands)	\$151,250
PY4*	58 (100 brands)	\$132,500

* As of November 1, 2010

These annual registration fees are dedicated to funding the state agency responsibilities under the Act. The Minnesota Electronics Recycling Act is managed by one FTE for implementation and oversight activities under the Act, along with a 0.75 FTE for compliance and enforcement. Additional annual costs include \$16,500 to the Department of Revenue for managing manufacturer reporting and registration and an estimated \$15,000 for market share data and analysis as required under the Act.

Recycling credits

The concept of recycling credits was introduced in the legislative consideration of the Minnesota Electronics Recycling Act to value those pounds collected above a manufacturer's obligation. The intent was to recognize the difficulty in directly matching collection activity to a manufacturer's obligation. The provision also anticipated a market for credits among the manufacturers to buy and sell credits to meet the annual obligation.

While the generation of recycling credits that has occurred each year of the program demonstrates Minnesotans' interest in recycling unwanted electronic products, it also illustrates that the MPCA's initial projections of the availability of recyclable products were too low and that the problems associated with the first year reporting on sales of video display devices which underreported sales created a long term inequity between generation of waste electronics and the obligation.

As described above, the Legislature did address the use of credits during the 2009 legislative session. While these changes may have an eventual impact on the generation of credits, they do not fundamentally change the further creation of recycling credits as expressed in the table below.

The law seeks to promote expansive collection activity and manufacturers who generate credits in excess of their obligation should not be penalized for doing so. However, in order to create more stability for the program and address an often voiced concern, the MPCA does recommend further changes to the creation and use of credits.

Program Year	Number of Manufacturers Claiming Credits	Credits Generated	Credits Used	Total Credits Remaining
PY1	42	19 million lbs.	—	19 million lbs.
PY2	35	*n/a	*n/a	21.6 million lbs.
PY3	38	14.7 million lbs.	4 million lbs.	31.3 million lbs.

* Figures unavailable from the Department of Revenue.

Recycling fees

In keeping with the underlying premise of flexibility for stakeholders, the program permits manufacturers of obligated products to remit a fee per pound of their obligation to the state to fulfill their obligation. The recycling fee is also assessed to manufacturers that did not meet their full obligation:

Program Year	Total Recycling Fees Paid by Manufacturers	Manufacturers Paying Fees
PY1	\$219,725	24
PY2	\$96,314	23
PY3	\$181,331	22

- 90 percent or more: \$0.30 per pound of shortfall.
- 50 to 89 percent: \$0.40 per pound of shortfall.
- Less than 50 percent: \$0.50 per pound of shortfall.

One of MPCA's ongoing goals is to reduce the amount of recycling fees paid by manufacturers through improving communication with manufacturers (to ensure that they understand and can quantify their recycling obligation), and communication between stakeholders (so that collectors and recyclers with pounds to sell can develop relationships with manufacturers that need additional pounds).

Overall system costs for the Minnesota Electronic Recycling Act

The statute does not require, and the MPCA does not collect, data from collectors, recyclers and manufacturers on the costs to operate the collection and recycling system and the details of contractual arrangements. Minnesota's producer-responsibility approach emphasizes a flexible, outcomes-based approach and transactions between private and public entities; the Legislature did not impose additional reporting obligations on registered stakeholders.

The MPCA does not have data on the overall cost to run Minnesota's Electronic Recycling Act, including the fees that are charged by some collectors, the per-pound fees charged by recyclers, or the financial arrangements between the manufacturers and recyclers. The per-pound price of recycling covered electronic devices sold to households is not known because the cost is variable, but resources will be devoted to finding the average price in the future.

However, based on anecdotal discussions with recyclers as well as publically available data from local government such as Hennepin and Carver Counties, the per-pound cost for collecting and processing waste electronics is generally lower, and some instances dramatically lower, than what was in place prior to the Act's implementation in July 2007.

Grant program

In an effort to ensure collection occurs in Greater Minnesota, the Act authorizes the MPCA to offer a competitive grant program for counties outside of the eleven-county metropolitan area. The MPCA issued two requests for proposals during 2009 and 2010, but only two submissions met the minimum scoring requirements. The MPCA awarded two grants for a total of \$30,259.51 (Lac Qui Parle County and the Western Lake Superior Sanitary District in Duluth.)

The funding for the grant program is dependent upon the availability of funds that accrue through recycling fees due to manufacturers who do not or choose not to meet their obligation. If the fee revenue declines in the future as anticipated given the above-market per-pound recycling fee structure, the MPCA will review whether this grant opportunity will be offered in the future or will be shifted to emphasize infrastructure initiatives such as grants for market development activity for specific materials and commodities (such as plastic) that are generated from the recycling of waste electronics. Efforts such as these will lower the overall cost of collecting and processing waste electronics in Minnesota.

Compliance and enforcement activity

The MPCA is generally quite pleased with the level of compliance with the Act and has undertaken few enforcement actions directly related to non-compliance.

The original provision that required retailers to report sales of video display devices to registered manufacturers proved to be the most significant compliance and enforcement challenge facing the Agency; this requirement was removed during the 2009 legislative session. The MPCA initiated enforcement action against a retailer with an administrative penalty order (APO), in which the MPCA levied and received a \$4,900 non-forgiveable penalty for failing to report VDD sales for PY1. Most of the Agency's compliance activity has focused on ensuring that collectors and recyclers comply with the registration and reporting requirements under the Act. This includes citing a number of previously unregistered collectors, as part of other actions, founded on investigations of complaints.

The level of compliance by the manufacturers obligated under the Act has been quite high. The MPCA has generally been able to secure manufacturer registrations without initiating formal enforcement actions such as administrative penalty orders or fines.

Summary of laws in other states

Following the enactment of the Minnesota Electronics Act, several other states moved forward with statutory programs that utilize a current market share formula to establish the manufacturer's obligation. Most prominently, Wisconsin's law is quite similar to the statutory language in place in Minnesota, with a few enhancements. The MPCA analyzed the programs in Wisconsin, Indiana, Vermont, and New York to discern if several of the elements should be considered for potential amendments to 115A.1310. For additional state information, see Appendix A.

- **Wisconsin.** The statute establishes a collection and recycling system for certain consumer electronic devices discarded by households, K-12 public schools and Milwaukee Parental Choice program schools.
- **Indiana.** This law requires manufacturers of covered devices to finance and implement a recycling program for their products. The program allows consumers, public schools, and small businesses to recycle a larger group of products for free and went into effect April 2010.
- **Vermont.** The law in Vermont establishes a convenient, no-cost method for consumers to recycle covered electronic devices. The e-waste recycling program is for any household, charity, school districts, or small business (with 10 or fewer employees), starting July 1, 2011.
- **New York.** In 2010, New York enacted a comprehensive e-waste program that establishes e-waste recycling for consumers, schools, municipalities, small businesses, and small non-profits, starting April 1, 2011.

MPCA activity to promote consistency

The MPCA recognizes the importance of identifying opportunities to promote consistency with other states' programs, particularly with those in the Midwest. To that end, the MPCA is an active member in the Electronics Recycling Coordination Clearinghouse (ERCC), an organization created as a forum for the states with electronics recycling programs to exchange information and learn from each other's experience with implementation. A key function of the ERCC is to identify opportunities for program consistency as well as serve as a venue for discussion with manufacturers, retailers, haulers and others along the product chain.

The MPCA is also participating in an effort convened by U.S. EPA (Region V) to identify opportunities to promote the consistency of the existing programs in the Midwest (Minnesota, Wisconsin, Illinois, Indiana, and Michigan) as well as states that may consider enacting electronics recycling programs in the future (such as Iowa). The effort is examining strategies to promote consistency that include programmatic elements as well as those that require statutory changes.

Summary of comments received on the Act

Since the implementation of the Act, the MPCA has received several comments from stakeholders regarding whether the Act has functioned as intended. The majority of comments was voiced by local governments, and counties in particular, and addresses various aspects of the program.

- 1) The obligation for manufacturers was set too low initially and did not reflect the actual availability of electronics products for recycling or Minnesotans' willingness to recycle.
- 2) A majority of public entities do not have agreements with manufacturers and therefore must subsidize e-waste recycling programs
- 3) The rural credit multiplier does not effectively encourage manufacturers/recyclers to provide service in Greater Minnesota.
- 4) A significant amount of manufacturer's obligation is being met by covered electronic devices (CEDs), though only the manufacturers of video display devices (VDDs) bear the burden of funding the cost of recycling.
- 5) A significant number of public entities, mostly counties, are considered "underserved," meaning that there is little or no opportunity for residents to legally recycle CEDs or VDDs.
- 6) Some commercial electronics are still mixed with residential volumes; manufacturers receive those credits.
- 7) What can be done to support environmentally sound management and in particular to reduce the export of electronics overseas?

Recommendations for legislative consideration

The MPCA recommends the following changes to address several of the current challenges facing full implementation of the Minnesota Electronics Recycling Act to fulfill its legislative intent. The changes are meant to address key issues that have been identified over the past three years of the program and will take steps to more accurately align the volume of collected material to the obligation as identified in statute.

The MPCA did evaluate much more substantive changes that would significantly alter how the obligation is determined such as basing the obligation on the previous program year's collection volume as well as a collection convenience standard that is in place in several states (e.g., Oregon, Washington, and New York). However, an opportunity exists to build on the existing statutory approach and, if the following recommendations are implemented, many of the concerns articulated should be addressed.

Recommendation 1: Include desktop computers, desktop printers, digital video recorders (DVRs) and DVD players in the obligation

Rationale: Expanding the scope of products that determine manufacturers' obligation serves several important objectives for the program. First, it creates additional convenient collection opportunities for Minnesota residents for products that are used in a typical household. Secondly, the expansion of the number of obligated products will serve to address the imbalance between the weight-based obligation of manufacturers and the weight of products that is entering the collection and recycling infrastructure.

The products identified, with the exception of DVRs, are currently included in the program as covered electronic devices (CEDs) but do not count towards establishing the manufacturers' obligation. In effect, adding these products to the list of obligated products will create a level playing field in terms of what constitutes the obligation and what is collected.

	Estimated Sale Weights in Wisconsin (Household)	Estimated Sale Weights in Minnesota (Household)
Desktop PCs	4,973,351 lbs.	4,038,664 lbs.
Printers	6,157,370 lbs.	5,000,159 lbs.
Total	11,130,721 lbs.	9,038,823 lbs.
Calculations based on estimated sales in Wisconsin (July 2008-2009)		

Recommendation 2: Reduce the minimum screen size requirement for video display devices to seven inches.

Rationale: Reducing the screen-size requirement will accomplish two objectives of the program. The first is to ensure a level playing field for manufacturers. Several products, most notably laptops, are now sold with a screen size smaller than nine inches. Secondly, the screen-size reduction will also be consistent with the video display device screen-size requirement in Wisconsin.

Recommendation 3: Increase the obligation from the current level of 80 percent of the weight of sales sold in Minnesota during a program year to 90 percent.

Rationale: With the imbalance between the program year obligation for manufacturers and the collection volume, the MPCA recommends that the obligation be increased from 80 percent to 90 percent. Such an increase will, based on sales data for the third program year, contribute an additional 2,880,052 pounds of televisions, laptops and monitors to the obligation.

Recommendation 4: Change the concurrent program year obligation to be based on the previous program year sales of obligated products.

Rationale: The proposed change will provide more certainty to all parties involved in the program regarding the annual collection target for a particular year since it is based on actual data.

Recommendation 5: Narrow the geographic area from where collected pounds can be converted into recycling credits.

Rationale: The MPCA recommends that recycling credits can only be generated from pounds that are collected in counties outside of the 11-county metropolitan area. Not only will this recommended change slow the creation of recycling credits but it will also presumably serve as an additional incentive to provide collection service in Greater Minnesota.

Recommendation 6: Expand the disposal ban to all obligated products

Rationale: By extending the disposal ban to all obligated products, it creates a level-playing field and will reduce confusion for consumers, collectors and recyclers. At the present time, cathode-ray-tube-containing products as well as mercury-lamp-containing products, such as flat-panel displays, are banned from disposal in solid waste.

Recommendations summary table

The following table illustrates the potential impacts of the recommendations on the program, using PY3 reporting as a baseline. “Program pounds” reflect the 0.5-pound multiplier for CED collected outside the 11-county metropolitan area.

	PY3	Change 1: Expand products (% change)	Changes 1 & 2: Expand products and increase obligation to 90%
Sales	28,800,506	37,895,403 (+32%)	37,895,403 (+32%)
Recycling obligation	23,040,405	30,316,322 (+32%)	34,105,862 (+48%)
Recycled pounds purchased (program)	33,317,557	33,317,557 (0%)	33,317,557 (0%)
Pounds collected (program)	42,424,733	42,424,733 (0%)	42,424,733 (0%)
Pounds recycled (program)	39,582,714	39,582,714 (0%)	39,582,714 (0%)

Appendix A: Summary of electronics recycling laws in other key states

Wisconsin

<http://dnr.wi.gov/org/aw/wm/ecycle/index.htm>

Enacted: 2009

Manufacturer obligation: 80 percent of weight of obligated products placed on market

Fees: Annual registration fee of \$5,000, and if applicable, shortfall fees

Disposal ban: televisions; computers (desktop, laptop, net book and tablet computers); desktop printers (including those that scan, fax and/or copy); computer monitors; other computer accessories (including keyboards, mice, speakers, external hard drives and flash drives); DVD players, VCRs and other video players (i.e., DVRs); fax machines; and cell phones.

Device types:

- Covered electronic devices (CEDs) is the category used to determine which manufacturers must register under E-Cycle Wisconsin and how much they must recycle each year. CEDs include desktops, printers and printer combos, VDDs (TVs, laptops and monitors greater than 7 in.)
- Eligible electronic devices (EEDs) is a broader category of devices that manufacturers can count toward their recycling obligation. EEDs include all of the CEDs listed above, computer peripherals, including keyboards, mice, hard drives and other devices; fax machines; and DVD players, VCRs and other video players (i.e., DVRs).

Rural incentive: To increase collection in underserved parts of the state, the law allows manufacturers to multiply by 1.25 the weight of EEDs collected from households and covered schools in rural counties.

Credits: If a manufacturer recycles more than its target recycling weight during a given program year, it earns recycling credits equal to the number of excess pounds, up to 20 percent of its recycling target; for example, if a manufacturer's target is 1,000 pounds, it can carry over up to 200 pounds of credits.

The manufacturer may use credits to help meet its recycling target in any of the next three program years, or sell credits to another manufacturer for use in any of those years.

Recycling fee: Beginning with program year 2 (July 1, 2010, to June 30, 2011), if a manufacturer fails to reach its recycling target, it must pay a shortfall fee along with its registration fee for the next program year. The first time a shortfall fee would be due is with a manufacturer's registration and report due September 1, 2011.

Shortfall fees will be based on a graduated scale determined by how far short of its recycling target the manufacturer is for the program year.

- 50 cents per pound if total weight of EEDs recycled is less than 50 percent of its target.
- 40 cents per pound if total weight of EEDs recycled is between 50 and 90 percent of its target.
- 30 cents per pound if the total weight of EEDs recycled is between 90 and 100 percent of its target.

Indiana

www.in.gov/recycle/5721.htm

Enacted: 2009

Manufacturer obligation: 60 percent of weight of obligated products placed on the market.

Fees: Pay a registration fee of \$5,000 for the initial program year and for each year thereafter a registration fee of \$2,500 plus a variable recycling fee based on the amount of electronic devices recycled by the manufacturer from households during the previous year.

After the first two years, manufacturers who fail to meet the OEM obligation goals will pay an additional recycling fee for every pound they fall short of their goal.

Disposal ban: Desktops, laptops, CRT TV, CRT monitor, flat panel TVs, flat panel monitors, fax, DVD, VCR, computer peripherals

Device types:

- Video display device (VDD) includes a television or computer monitor, including a laptop computer, netbook, notebook, tablet PC, and e-reader, that contains a cathode ray tube or flat panel screen with a screen size that is greater than four inches measured diagonally.
- Covered electronic devices (CEDs) include VDDs, computers, fax machines, peripherals, DVD players, digital photo frames, digital media players, iPods/MP3 players, camcorders/cameras, DVRs, and portable GPS navigation systems.

Rural incentives:

- Multiply the actual weight of CEDs collected and recycled by 1.1 for utilizing an Indiana recycler.
- Multiply the actual weight of CEDs collected and recycled by 1.5 for CEDs collected in non-metropolitan Indiana counties.
- Multiply the actual weight of CEDs collected and recycled by 1.6 for CEDs collected in non-metropolitan Indiana counties and recycled by an Indiana recycler.

Credits: Manufacturers that collect and recycle above their required 60 percent recycling goal will receive credits in the amount of 25 percent of the overage collected and recycled. Credits can be used up to three program years in the future and can also be sold to or purchased from other manufacturers and used to help meet a manufacturer's 60 percent recycling goal.

Recycling fee: A manufacturer registered with IDEM that fails to meet the 60 percent recycling goal beginning with program year 3 (ending March 31, 2013) and each year thereafter will be subject to a variable recycling fee.

- \$0.40 per pound of shortfall if they recycle less than 50 percent of their required recycling obligation;
- \$0.30 per pound of shortfall if they recycle at least 50 percent but less than 90 percent of their recycling obligation; or
- \$0.20 per pound of shortfall if they recycle at least 90 percent of their recycling obligation.

Vermont

www.anr.state.vt.us/dec/e-waste/index.htm

Enacted: 2010

Manufacturer obligation. Two compliance options:

- “Standard plan” to be developed by state agency- market share by prior quarter’s cost for operating the program
- Individual option - market share obligation of statewide recycling goal

Fees: In 2010, \$1250 for manufacturers who sell no more than 100 CEDs per year, or \$5000 for manufacturers who sell more than 100 CEDs per year. In 2011 and beyond, the registration fee will be based on manufacturer’s market share by weight.

There will also be an implementation fee starting July 1, 2011. This fee covers the manufacturer’s share of the costs of the standard plan for the collection, transportation, and recycling of e-waste, unless the manufacturer obtains approval of an opt-out plan.

Disposal ban: After January 1, 2011, computers including laptops, computer monitors, device containing a cathode ray tube, printers, televisions and personal electronics such as personal digital assistants, MP3s, electronic game consoles, fax machines, wireless telephones, telephones, answering machines, VCRs, DVD players, digital converter boxes, stereo equipment, and power supply cords (as used to charge electronic devices).

Device types: Desktops, printers, laptops, monitors, TVs

New York

www.dec.ny.gov/chemical/65583.html

Enacted: 2010

Manufacturer obligation: Must recycle or reuse market share, by weight, based on three-year average of annual sales in the state and proportionate to the overall statewide recycling goal, which would be graduated initially and then based on the volume of all electronics returned for recycling.

The Act enables manufacturers of covered electronic equipment (CEE) to meet their obligations through individual or collective electronic waste acceptance programs. For both programs, a manufacturer must provide for the convenient collection, handling and recycling or reuse of electronic waste. Manufacturers must provide at least one reasonably convenient method of collection within each county, and within each municipality with a population greater than 10,000.

Beginning April 1, 2011, a manufacturer of CEE must accept for collection, handling and recycling or reuse electronic waste for which it is the manufacturer. Manufacturers of CEE must also accept one piece of electronic waste of any manufacturer’s brand if offered by a consumer, with the purchase of CEE of the same type by a consumer.

Beginning April 1, 2011, each manufacturer must accept for collection and reuse or recycling a sufficient amount of electronic waste to meet the manufacturer’s acceptance standard. The manufacturer’s acceptance standard is the product of the statewide recycling goal multiplied by the manufacturer’s market share of CEE, which will be determined and provided to the manufacturer by the Department.

Fees: A one-time registration fee of \$5,000. In addition, Manufacturers must collect, recycle and reuse based on market share of electronic sales in New York. Those who do not collect their share will face fines that will go toward state-run recycling programs.

Disposal ban: Desktops, laptops, CRT TV, CRT monitor, flat-panel TVs, flat-panel monitors, printers, keyboards, mice

Device types: Covered electronic equipment (CEE) includes computers, televisions (greater than 4 in.), small scale servers, computer peripherals, monitors, electronic keyboards, electronic mice or similar pointing devices, facsimile machines, document scanners, printers, VCRs, DVRs, portable digital music players, DVD players, digital converter boxes, cable or satellite receivers, electronic or video game consoles.