



Indiana E-Cycle 2016 Report

August 1, 2016

Indiana Department of Environmental Management

Office of Program Support

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Summary

The Indiana electronic waste (e-waste) law (IC 13-20.5) created an extended producer responsibility (EPR) program, known as Indiana E-Cycle, under which manufacturers of video display devices (VDDs) are required to collect and recycle e-waste from covered entities (households, small businesses, and public schools) in Indiana. The Indiana Department of Environmental Management (IDEM) manages the program. The law requires that manufacturers of VDDs that offer their products for sale to Indiana households annually register with and report to IDEM. Each year these manufacturers are required to collect and recycle 60 percent by weight of the total weight of VDDs they sold to Indiana households during the previous twelve months. They can collect and recycle a broader range of products of any brand, known as covered electronic devices (CEDs), to fulfill their obligation.

All collectors and recyclers that collect and/or recycle CEDs on behalf of a registered manufacturer must also register with and report to IDEM annually. If collectors and/or recyclers do not register with the program, CEDs collected and recycled cannot be credited toward a manufacturer's recycling obligation.

The law also contains a disposal prohibition which, as of January 1, 2011, prohibits covered entities from disposing of CEDs with trash that is intended for disposal at a landfill or by burning or incineration.

This year, 2016, marks the seventh year of the Indiana E-Cycle Program. This report will examine the last six years of the Program as well as provide the required annual information mandated by the Indiana legislature. For example, highlighting Program Year 6 (PY6), manufacturers collectively funded the recycling of 19,113,809 pounds of covered electronic devices, again exceeding their recycling obligation, before the addition of incentives. The vast majority of the weight recycled as part of the program continues to be collected from metropolitan counties in the state. For PY6, 84 percent of manufacturers that were registered submitted annual reports and 67 percent of recyclers registered for PY6 submitted annual reports.

Legislative Requirements

This report fulfills the requirements contained in IC 13-20.5-7-4. IDEM is to submit a report concerning the implementation of the Indiana E-Waste Law to the general assembly, the governor, the Interim Study Committee on Environmental Affairs, and the Indiana Recycling Market Development Board before August 1.

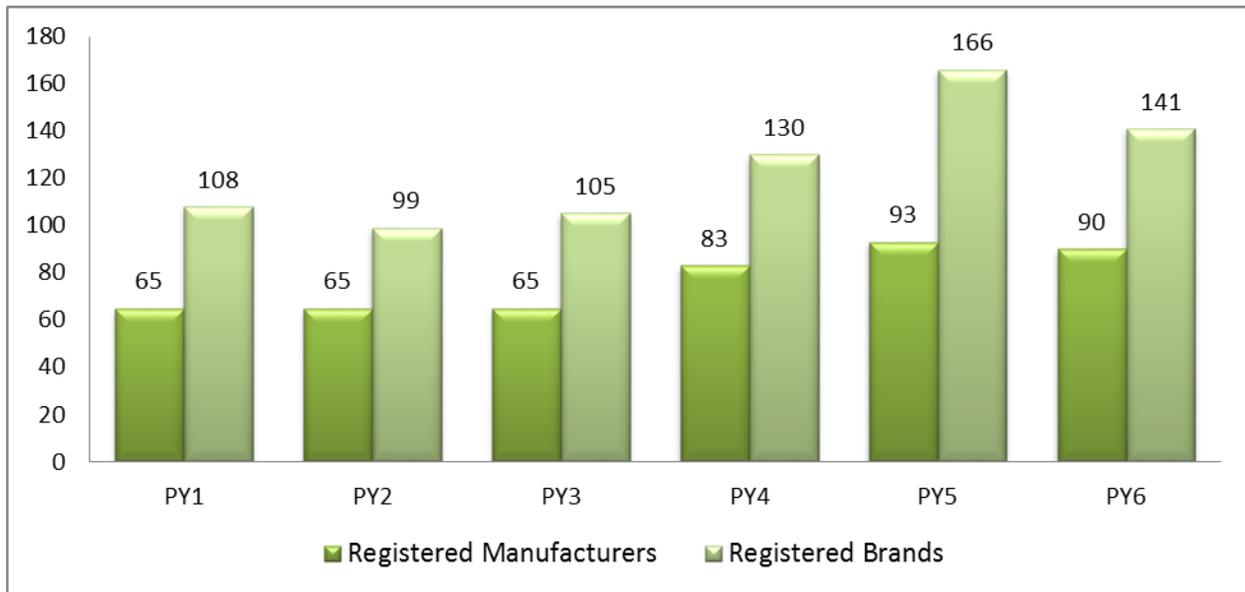
Required content includes:

- A summary of information in the annual reports submitted by manufacturers and recyclers.
- Information regarding the total weight of CEDs recycled.
- The various collection programs used by manufacturers to collect CEDs.
- Information regarding CEDs that are being collected by persons other than registered manufacturers, collectors, and recyclers.
- Information about CEDs, if any, being disposed of in landfills in Indiana.
- A description of enforcement actions under the Indiana E-Waste Law.

Program Participation

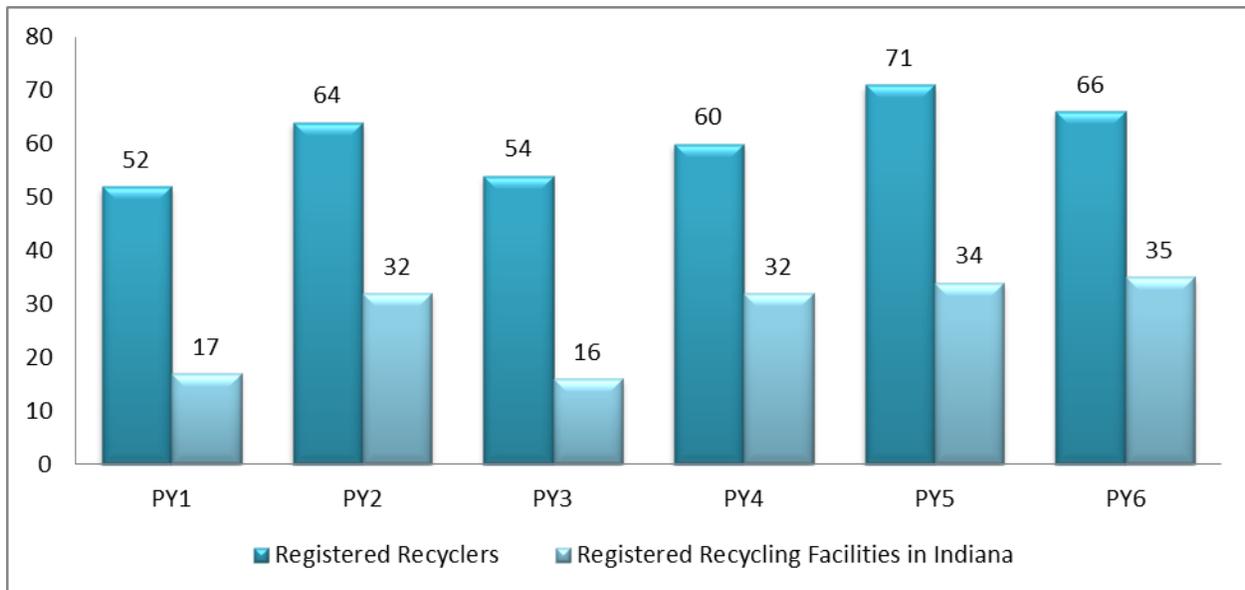
While the number of registered manufacturers and brands remained relatively unchanged from the previous program year, the companies that are registered has varied as new manufacturers enter the market, other manufacturers exit the market, and mergers and acquisitions occur. A total of 90 manufacturers registered with the Indiana E-Cycle Program for PY6. These 90 manufacturers accounted for 141 different brands of devices that are being sold to Indiana households.

Figure 1: Registered Manufacturers and Brands



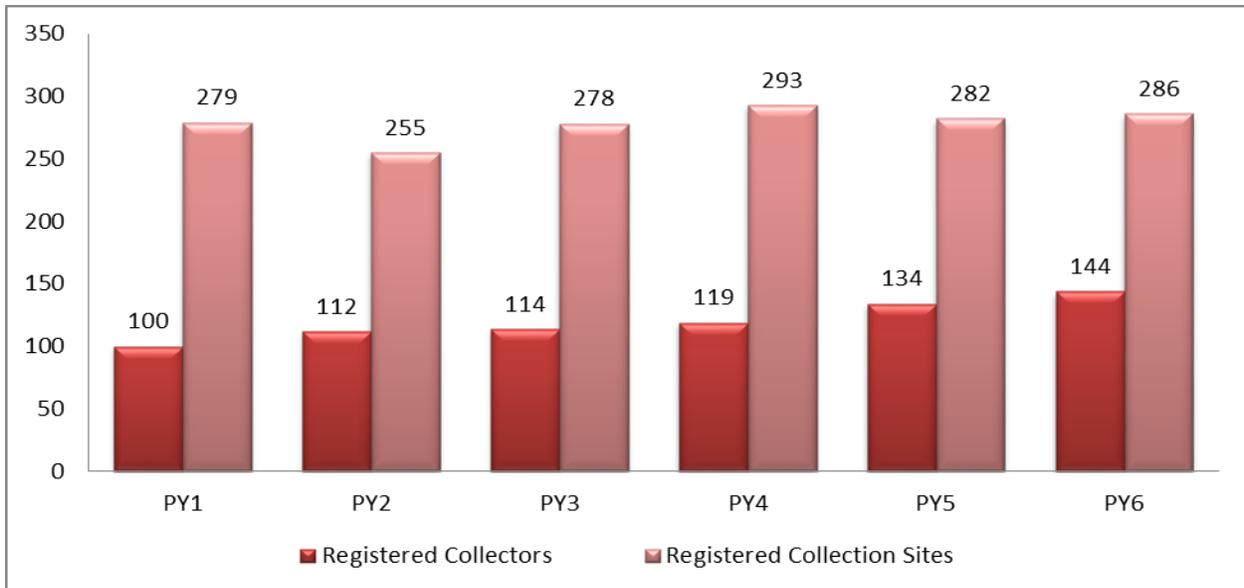
For each of the first six program years, the majority of registered recyclers have also been registered collectors. The number of registered recyclers for PY6 remained relatively unchanged from the previous program year. For PY6, of the 66 registered recyclers, 35 of them are located in Indiana.

Figure 2: Registered Recyclers and Registered Recycling Facilities in Indiana



As shown in **Figure 3**, the number of registered collectors and collection sites also remained relatively unchanged from the previous program year. Collectors are not allowed to perform any dismantling of CEDs and they do not have to be located in Indiana to participate in the program.

Figure 3: Registered Collectors and Collection Sites



Summary of Information in the Annual Reports Submitted by Manufacturers and Recyclers (Including Total Weight of CEDs Recycled)

A 50 percent incentive is earned for collecting CEDs from non-metropolitan counties in the state and a 10% incentive is earned for recycling CEDs at a registered facility in Indiana. These incentives can be combined; for example, each pound of CED collected from a non-metropolitan county and recycled at an in-state recycling facility is counted as 1.6 pounds recycled. Figures 4 and 5 show how many pounds of CEDs were recycled by manufacturers registered in PY6 and the previous program years in which annual reports were submitted. Program Year 6 annual reports were not received from 14 of the 90 manufacturers that were registered in 2015.

Figure 4: Covered Electronic Devices Recycled by Registered Manufacturers (lbs)

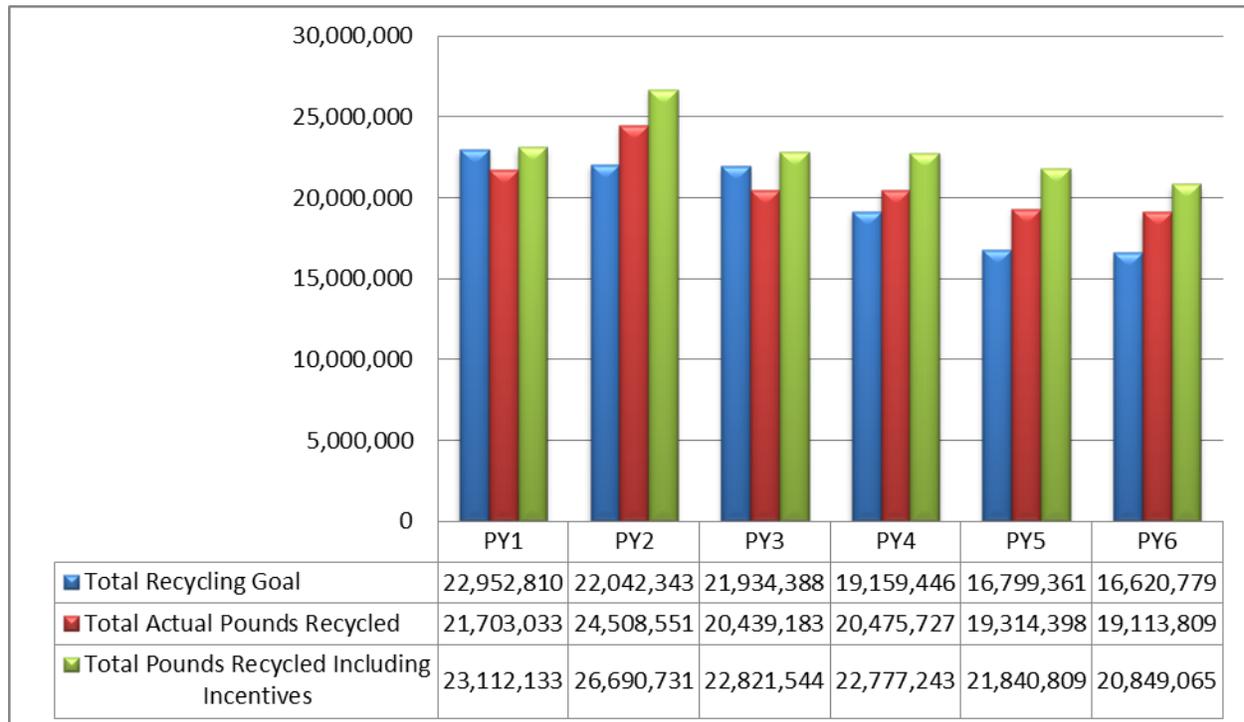
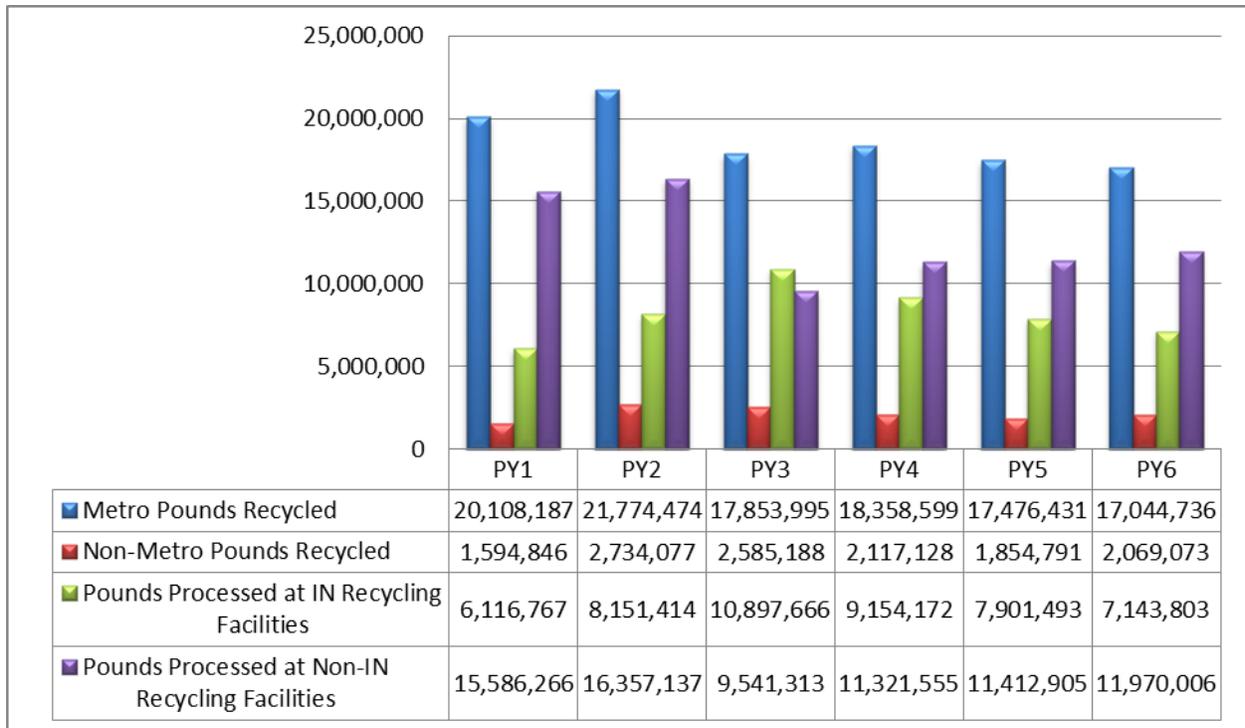


Figure 5: Covered Electronic Devices Recycled by Registered Manufacturers: Details (lbs)



Figures 6 and 7 show how many pounds of CEDs were recycled by recyclers registered in PY6 and the previous program years in which annual reports were submitted. Recyclers recycled approximately 890,000 pounds over what registered manufacturers were responsible for recycling.

Figure 6: Covered Electronic Devices Recycled by Registered Recyclers (lbs)

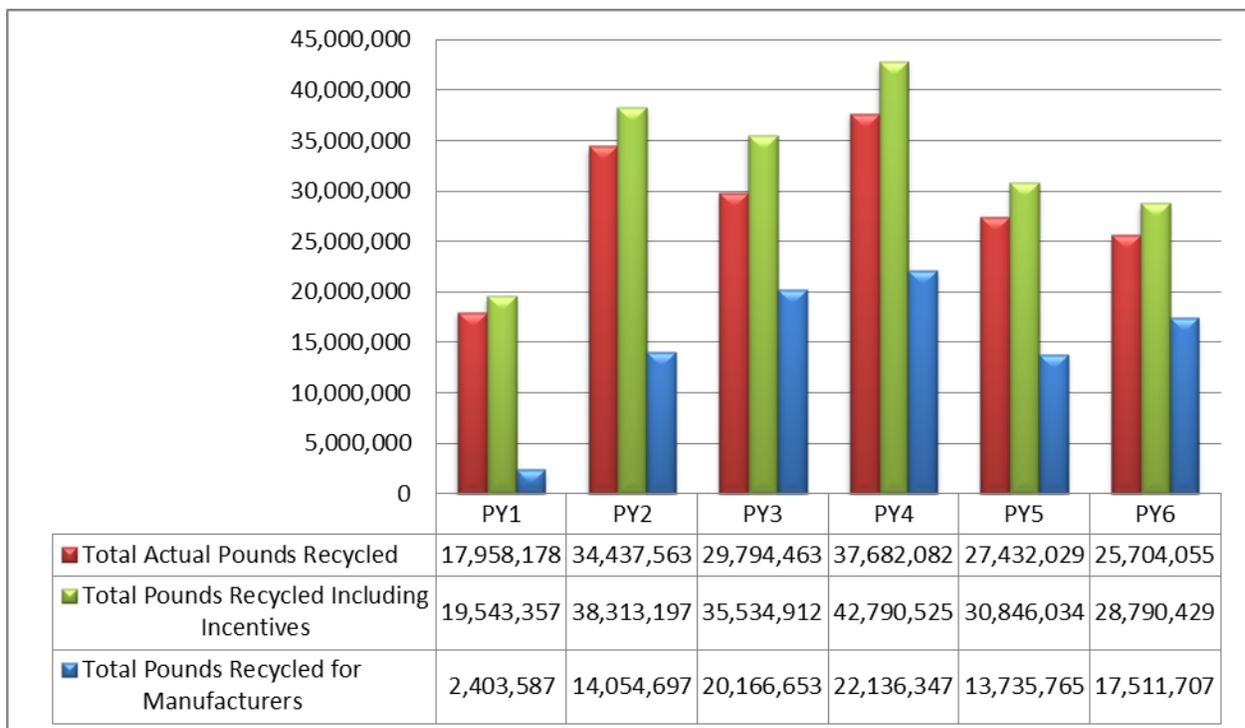
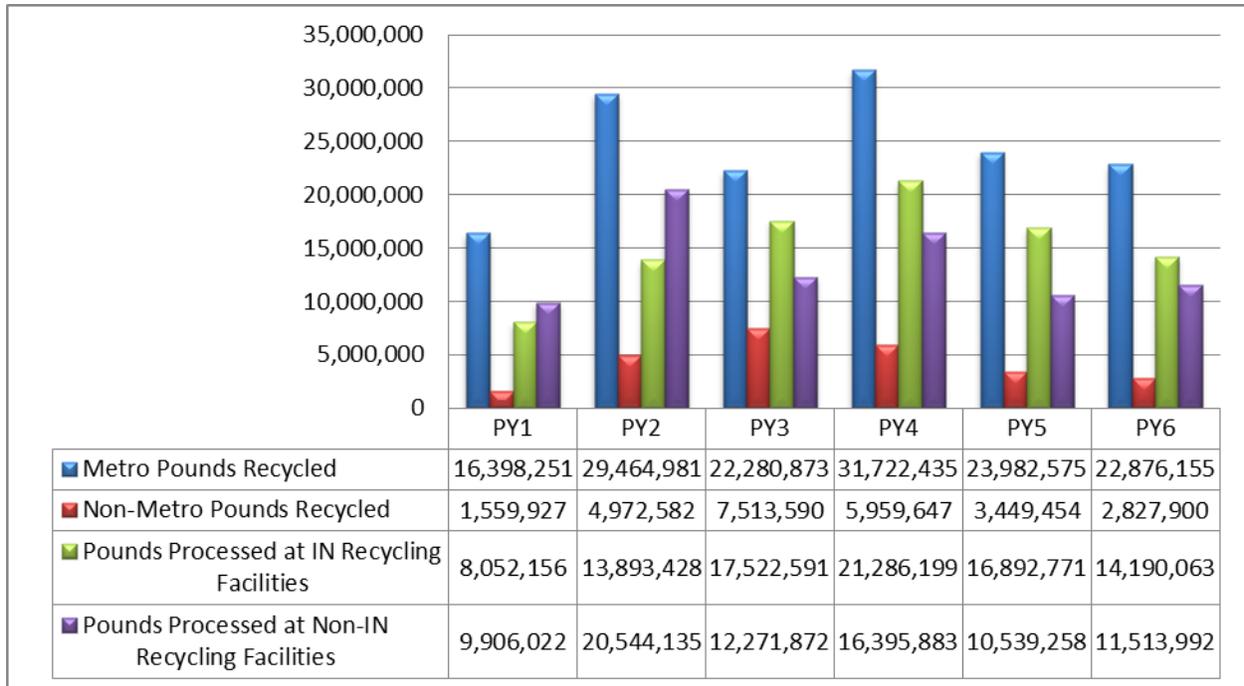


Figure 7: Covered Electronic Devices Recycled by Registered Recyclers: Details (lbs)



Based on the reporting trends, the demand for CED recycling in Indiana will continue to exceed the amount of CEDs that manufacturers are responsible for recycling given that new VDDs are becoming lighter than older CEDs. In addition, the list of items that meet the definition of CED is more extensive than the list of items that are defined as VDDs. Lastly, manufacturers' recycling obligations are based solely on their sales of VDDs to households, while CEDs collected to meet their recycling obligations can come from households, small businesses, and public schools.

The results of Indiana E-Cycle in terms of pounds of e-waste recycled per resident are as follows:

	<u>Lbs/Capita (Actual Pounds)</u>	<u>Lbs/Capita (Including Incentives)</u>
PY1	3.35	3.56
PY2	3.78	4.12
PY3	3.13	3.49
PY4	3.12	3.47
PY5	2.93	3.31
PY6	2.89	3.15

If a manufacturer exceeds their recycling obligation, 25% of the excess pounds are converted to recycling credits that can be used by the manufacturer in any of the three immediately following program years or sold to another manufacturer. Manufacturer credit details are as follows:

	<u>Credits Earned</u>	<u>Credits Bought/Sold</u>	<u>Credits Used</u>	<u>Credits Expired</u>	<u>Credits Retained</u>	<u>Manufacturers Holding Credits</u>
PY1	1,074,733	0	n/a	n/a	1,074,733	18
PY2	1,623,705	0	19,253	n/a	2,653,837	23
PY3	555,630	0	116,758	n/a	3,090,762	26
PY4	967,292	87,256	104,592	809,875	3,039,188	37
PY5	1,174,168	246,957	808,867	586,136	2,579,219	29
PY6	1,057,072	0	128,070	465,811	3,024,254	25

Various Collection Programs Used by Manufacturers to Collect CEDs

Manufacturers registered with Indiana E-Cycle utilize three types of collection programs to fulfill their recycling obligations:

1. Permanent collection sites
2. Temporary/special collection events
3. Manufacturer take-back programs

Multistate Collaboration

The Indiana E-Cycle Law permits IDEM to participate in and join regional multistate organizations or compacts to assist in implementing the article. Although, Indiana has not taken advantage of this opportunity, IDEM does participate in regular conference calls with other Midwestern states, which are coordinated by U.S. EPA's Region 5 office. The majority of the states that participate in the calls also have e-waste laws, most notably, Minnesota and Wisconsin, which have laws comparable to Indiana's. The information shared and the coordination achieved on these calls is valuable in assisting with the implementation of Indiana's law.

Description of Enforcement Actions Under the Indiana E-Waste Law

Manufacturers that do not meet their recycling obligation are subject to a shortfall fee, or a variable recycling fee (VRF). The VRF is calculated as follows:

- Forty cents per pound of shortfall for manufacturers that recycle less than 50 percent of their goal.
- Thirty cents per pound of shortfall for manufacturers that recycle at least 50 percent, but less than 90 percent, of their goal.
- Twenty cents per pound of shortfall for manufacturers that recycle at least 90 percent of their goal.

Nine manufacturers were required to pay a shortfall fee for PY5, resulting in \$3,852.36 for a total shortfall of 10,390 pounds. For PY6, eight manufacturers will be required to pay a shortfall fee for a total amount of \$4,722.60.

Manufacturers that were exempt from the registration fee for PY6, because they sold less than 100 units of video display devices to households during PY5, are exempt from the VRF

There have not been any enforcement actions under the Indiana E-Waste Law.

Conclusion

Indiana's E-Cycle Program has achieved numerous successes since it took effect in 2009, most notably helping to allow for roughly 175 million pounds of covered electronic devices to be recycled. Indiana has also had the benefit of having a large number of collectors register with the program, which allows Indiana residents the ability to have numerous options in regards to recycling their electronic devices.

Since the inception of the program, the amount of e-waste that registered manufacturers are responsible for recycling each year has declined considerably. This is due in large part to the continued lightweighting of products (products getting smaller and/or weighing less) and changes in the types of products that are being purchased (e.g., tablets instead of laptops).

Although this report is as conclusive as the current data systems within IDEM allow, in the future the E-Cycle program is looking at ways to include information about CEDs that are being collected by persons other than registered manufacturers, collectors, and recyclers as well as information about CEDs, if any, being disposed of in landfills in Indiana.