

2015 Annual Status Report on Connecticut's State-wide Consumer Electronics Recycling Program (CGS 22a-629 through 22a-640)



**Over 50 Million Pounds of Unwanted Electronics Gets New Life
Over 40 CT Recycling Jobs Created and
Over \$2 Million Dollars Saved By Municipalities!**

Pursuant to Section 22a-639(b) of the Connecticut General Statutes (“CGS”), the [Connecticut Department of Energy and Environmental Protection](#) (“DEEP”) presents its annual status report (“report”) on Connecticut’s state-wide electronics recycling program (“program”). This report is required to evaluate the effectiveness of the program, and to provide information about any federal electronics recycling law if such federal law substantially meets or exceeds the requirements of Connecticut’s program. The report finds Connecticut’s program is being successfully implemented, and that the federal government has not established a national program for the collection and recycling of electronic devices.

Connecticut’s electronics recycling law (CGS Section 22a-629 thru Section 22a-640) is one of several successful Extended Producer Responsibility (“EPR”) laws requiring the manufacturers to pay for the recycling of their products. Specifically with electronics, the manufacturers pay for the collection, transportation and recycling of residentially generated Covered Electronic Devices (“CEDs”) which means computers, monitors, printers, and televisions sold to consumers. This program has no direct cost to consumers or municipalities. Recyclers are approved by DEEP to ensure responsible recycling practices are being used. Towns are only responsible to provide for the convenient and accessible collection of CEDs for their residents. Most towns have chosen to use an existing transfer station or regional waste collection as their collection points, while other towns use special collection events, or designate specific businesses as a drop off location.

The State Fiscal Year (“SFY”) 2015 data analyzed by DEEP was derived from the semi-annual reports required to be submitted by the 6 (six) approved Covered Electronics Recyclers (“CERs”), and supplemental information and data from registered manufacturers of covered electronics. Census population data was also used to determine the state-wide pound per capita rates for unwanted electronics collected under the program.

Since February 2011, Connecticut’s electronics recycling program has transformed the collection and recycling of unwanted CEDs in Connecticut. The result is thousands of tons annually of unwanted electronics getting recycled into new products, creating new jobs, keeping toxic materials out of the environment, and to date over two million dollars saved in avoided disposal fees by Connecticut’s municipalities. It’s an equitable and efficient system since the manufacturers that make the products are now financing the system that recycles them. Connecticut was the fourth state in the U.S. to have an electronics recycling program financed by electronics manufacturers.



A summary of some electronics recycling program benefits, successes, challenges and future considerations since the inception of the program are presented below.

On-going Benefits:

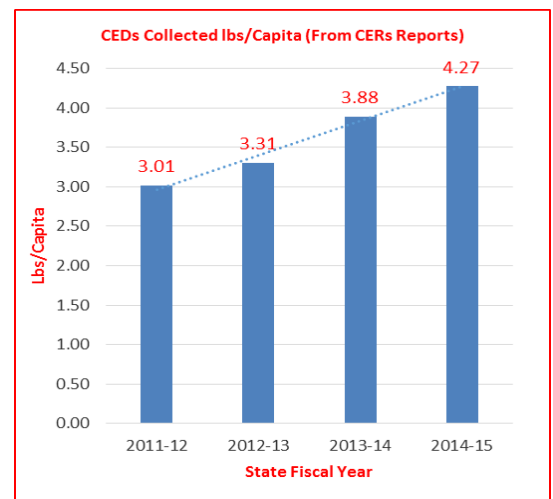
No fees for consumers and no recycling/disposal costs for municipalities. Before the establishment of Connecticut's program, consumers often paid for recycling with limited availability to recycle even if they wanted to. For residential electronics thrown away, most Connecticut municipalities would be charged for disposal [up to \$90 per ton].

Convenience and Accessibility. There are now over 163 approved collection locations statewide, one of the most comprehensive collection networks in the country. Currently, there are 150 municipal transfer stations and 13 regional collection plans approved to cover all of Connecticut's residents. Other approved collection locations include various retail stores such as Savers, not-for-profit drop off centers, and businesses specializing in electronics recycling (Green Monster e-Cycling LTD located in West Hartford, and Take 2 Inc. located in Waterbury). Each town must have a collection plan approved by DEEP, so check with your town for locations and drop off times.

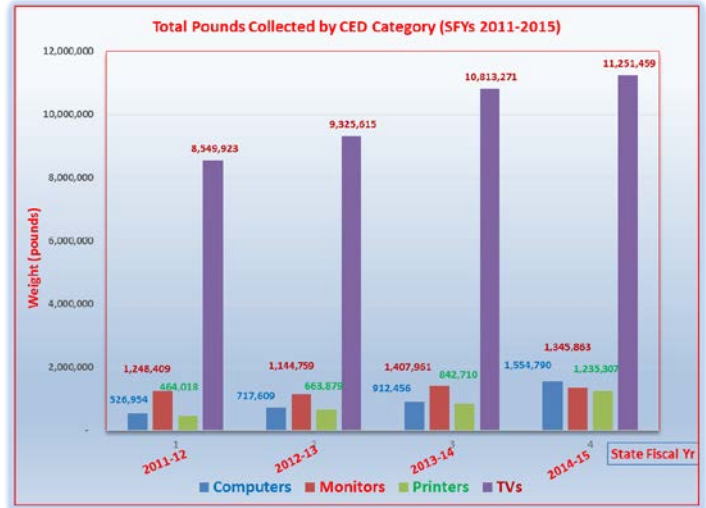
Responsible Recycling and Disposal. CERs are approved by DEEP to ensure that CEDs are recycled in a responsible manner. Connecticut is one of only a few states that evaluate recyclers to ensure electronics are actually recycled and not abandoned or dumped into questionable international markets. The regulations require recyclers and their downstream partners to have safeguards including: facility and data security, insurance coverage for pollution releases and financial assurance to protect taxpayers from paying for cleaning up illegally dumped or abandoned materials. CERs are also required to track and report to DEEP the movement of electronics downstream until the material is used as an industrial feedstock or recycled into a new product.

Cumulative Program Successes:

- Over 50 million pounds (26,000 tons) of CEDs have been collected cumulatively since the inception of Connecticut's program in February 2011. In SFY 2015, over 15 million pounds of CEDs were collected by the CERs, or a state per capita rate of 4.27 lbs/capita. Additionally, if DEEP includes the total weight of CEDs reportedly collected by electronics manufacturers in private programs and all other electronics (Non-CEDs) reported by CERs, the total amount of electronics collected exceeds 18 million pounds, which equates to a state per capita rate of 5.23 lbs/capita for SFY 2015. Televisions accounted for the majority of the volume - over 73% of the reported weight. Computers were the next highest product type at 10% reported weight. The remaining weight was monitors, printers and other components. See table below for total pounds collected cumulatively by CERs by CED category.



- The table shows increasing amounts of CEDs collected, including televisions and monitors that contain Cathode Ray Tubes (“CRTs”) and flat screens. SFY 2015 data suggests early signs of a reduction of CRTs being collected in the waste stream and newer technology flat screens are already cycling through the program.
- Municipalities collectively saved over \$830,000 in SFY 2015 in avoided disposal costs, a savings that is expected to increase in future years.
- CERs reported a total of 78 direct full time jobs were created as a result of Connecticut’s program. Of the total, 41 of these jobs are currently located in Connecticut, with an additional 37 jobs located outside of Connecticut and improving the regional economy with direct and indirect jobs.



SFY 2015 Program Successes

- Over 1.3 million additional pounds of CEDs were collected by electronics manufacturers’ private programs that recycle their products by partnering with recyclers and retail stores [114 total in CT]. This is based on reports from 8 electronics manufacturers that have established additional local collection points such as Best Buy, Verizon, Goodwill, or Staples stores or mail-back programs.
- Recyclers reported the following were recycled into new products, placing valuable materials back into the stream of commerce:
 - 8.8 million pounds of CRT glass (estimated 600,000 pounds of lead recycled);
 - 2.1 million pounds scrap metal;
 - 1.5 million pounds of plastic;
 - 530,000 pounds of circuit boards;
 - 84,000 pounds of wood;
 - 9,000 pounds of glycol;
 - 2,000 pounds mercury containing materials; and
 - 540 pounds of batteries.



Program Opportunities / Next Steps:

Program Measures / Goals

- In SFY 2015, Connecticut’s program collected a rate of 4.27 pounds per capita based on the CERs and manufacturer’s semi-annual reports. This rate is comparable to other states with similar electronics recycling programs, and meets DEEP’s state-wide goal¹ of 4.0 pounds per capita. DEEP anticipates that with additional public education and outreach, consumer participation rates will increase and substantially exceed DEEP’s per capita goal. DEEP plans to continue to assess the suitability of this measure and decide whether to use it, expand it or recommend replacing it in out years.

¹ In 2007, DEEP set a convenience and accessibility goal of 4.0 lbs/capita on a state-wide basis on an expectation that each town/region meet that goal.

- DEEP plans to assess the development of new or additional program measures like consumer awareness, carbon footprint and greenhouse gases emitted as a result of the program in the triennial electronics recycling plan (forthcoming in late 2015).

Outreach & Education

- The state, municipalities and recyclers share in the responsibility to improve public awareness and participation in the program. In SFY 2015, DEEP created a 30 second video to help raise awareness of the program. See link to YouTube video [here](#).
- Additionally, in SFY 2015, DEEP hired a contractor to survey program awareness levels amongst Connecticut residents. The results suggested that 66% of Connecticut residents either ‘knew’ or ‘think they knew’ where to go to recycle CEDs in their communities. The other 33% (over 1 million residents) of Connecticut residents polled did not know of an outlet to recycle their CEDs. DEEP plans to develop innovative ways to improve public awareness.
- DEEP also plans to evaluate whether certain electronic devices may be considered to meet the law’s definition of a CED, including certain hand held gaming devices, game consoles, external data storage devices, satellite or cable boxes, and certain printers including 3-D printers. Note: the definition of CED includes for computers –cell phones with a screen size greater than 4” measured diagonally, laptops, desktops, e-readers, and tablets; for TVs and monitors – flat screen, rear-projection and CRTs; and for printers – desktop and all-in-one printers sold to consumers.
- DEEP continues to work closely with stakeholders to assess increasing recycling rates by possibly expanding the scope of collection by including schools (K-12), municipal CEDs, colleges and universities and small businesses and revisit the regulations, as necessary. Such expansion is consistent with numerous other states among the 26 with programs.



Compliance Assurance

- Improved accessibility is an ongoing need. While every town has an approved collection plan, at least 13 towns have reported zero or very little CEDs collected. DEEP plans to target enforcement in SFY 2016 to assure free, convenient and accessible recycling opportunities for all of Connecticut’s residents.
- DEEP has taken steps to establish and institutionalize enforcement protocols addressing compliance issues that inevitably arise. The intent of this initiative is to audit, inspect and, as necessary, investigate noncompliance with recycling standards applicable to approved CERs. In addition to a comprehensive selection process of approving CERs and their partners, a major program goal this past year has been to verify the accuracy of reported data by CERs including evaluating mass balance accounting of billable weights by an independent 3rd party. Additionally, inspection checklists and report templates have been tailored to reflect Connecticut’s specific recycling standards and requirements to improve the process. Two audits were performed in SFY 2015, and additional audits are anticipated in future years.

- Connecticut retailers under the law are prohibited from selling, or offering for sale, any CEDs from any manufacturer that is not in compliance with the law which includes, but is not limited to, failing to submit a registration under the program and defaulting on payments to an approved CER. A list of compliant and non-compliant manufacturers is maintained on [DEEP's website](#) and is updated on an on-going basis.
- A LEAN event was held in SFY 2015 which identified short-term and long-term goals for further streamlining the program. One short-term goal is to continue working towards transforming a resource-intensive recycler application review process to a streamlined e-government solution and online application process. DEEP is in the process of establishing a national clearinghouse to enhance transparency for recyclers, and their downstream partners as well, including the flow of material to end markets through the clearinghouse. Statutory and regulatory reforms are being explored and evaluated.
- DEEP's compliance assurance activities in the past year have included investigating and issuing two notices of noncompliance to a CER and a notice of violation to a partner of a CER. Additionally, an action was escalated to the Attorney General's Office for abandonment of collected devices.
- While there is currently no federal electronics recycling program in place, DEEP continues to engage in interstate collaboration to work closely with the [Northeast Recycling Council](#) ("NERC") and the [Electronics Recycling Coordination Clearinghouse](#) ("ERCC") to harmonize DEEP's program with other states to help streamline and improve the recycling infrastructure/system.
- In SFY 2016, DEEP plans to work closely with NERC/ ERCC to seek market share data directly from manufacturers to aid in assigning national market share to each manufacturer. DEEP's assignment of market share to each manufacturer drives a manufacturer's recycling responsibility and allocation of administrative fees.



RECYCLE Your E-Waste

*For information on how/where to
recycle your unwanted*

TVs, Computers, Monitors, & Printers

*go to the CT DEEP's website at
www.ct.gov/deep/e-waste
or call toll free 1.888.424.4193*

