

Update on California's Covered Electronic Waste Recycling Program Implementation of the Electronic Waste Recycling Act of 2003 (SB 20, Sher)

December 2016

All program responsibilities of the former California Integrated Waste Management Board (CIWMB or Board) have been transitioned to the Department of Resources Recycling and Recovery (CalRecycle).

Overview

The Electronic Waste Recycling Act of 2003 (Act), as amended and as codified in the Public Resources Code (PRC) 42460, et seq, established a funding mechanism to improve and provide for the proper end-of-life management of certain hazardous electronic products. The program is funded through a fee paid by consumers of covered electronic devices (CED) at the time of retail purchase. Collected fees are remitted by retailers to the State and deposited in an account. Subsequently, payments are made to approved collectors and recyclers of covered electronic waste (CEW) to offset the average net cost of appropriate waste recovery, processing, and recycling activities.

Intent of the Act:

- Provide financial relief to responsible parties for managing covered electronic waste
- Foster cost-free recycling opportunities for consumers throughout the state
- Reduce illegal dumping; increase compliant management and disposition
- Eliminate the stockpile of waste computer monitors/TVs
- Decrease amount of hazardous materials in covered products

Major Components of the Act:

- Assesses an electronic waste recycling fee on retail sales of covered electronic devices (CED).
- Tasks the Department of Resources Recycling and Recovery (CalRecycle) with administering a payment system for collectors/recyclers to cover the average costs of recovering/recycling CEW.
- Authorizes the Department of Toxic Substances Control (DTSC) to develop regulations for the proper management (storage, collection and recycling) of discarded electronic devices.
- Requires DTSC to adopt regulations, consistent with the European Union's Restriction of Hazardous Substances (RoHS) directive, limiting the concentration of hazardous metals in covered electronic devices offered for sale in California.
- Establishes certain manufacturer responsibilities: consumer information, brand labeling, annual reporting, product design for recycling, and reduction of hazardous materials

Covered Electronic Devices (CED)

CEDs are video display devices that have been determined by the Department of Toxic Substances Control (DTSC) to be hazardous when disposed. Covered devices must have screens greater than four inches on the diagonal. Unless excluded by PRC 42463(e)(2), current covered devices include:

- Cathode Ray Tube devices
- Televisions and computer monitors containing cathode ray tubes (CRTs)
- Televisions and computer monitors containing liquid crystal displays (LCDs)
- Laptop computers w/ LCD screens (including most "tablet" computers)
- Plasma televisions
- Personal portable DVD players w/ LCD screens

Revenue and Payment Status

CalRecycle has the statutory obligation to adjust the consumer fee in order to maintain fund solvency.

CalRecycle acted in July 2016 to increase the consumer recycling fee to maintain solvency and adequate fund reserves. This change will take effect January 1, 2017.

Annual Gross Revenue from Consumer Fees (from Governor's FY 16/17 Budget & Projections):

FY 2014/15 ~ \$59.4M; FY 2015/16 est. ~ \$58.0M; FY 2016/17 proj. ~ \$58.5M

- Consumers pay fee to retailers at time of new device purchase based on the screen size
- The consumer recycling fee is currently \$3, \$4, or \$5 per new device depending on screen size
- **In July 2016, CalRecycle acted to adjust the fee to maintain fund solvency. Effective January 1, 2017, the fee will be \$5, \$6, and \$7, depending on screen size.**
- Retailers remit collected fees to the Board of Equalization and retain 3% for administrative costs.
- Manufacturers are required to notify retailers regarding which products are subject to the fee.

Covered Electronic Waste (CEW) Payment System (as of December 2016):

Approved Collectors: ~423

Approved Recyclers: ~30

- Growth in California's electronic waste collection and recycling infrastructure has been fostered by the Act and the CEW recycling payment system.
- Voluntary participation includes a diverse group: non-profits organizations, solid waste handling concerns, local governments and traditional e-waste collection and recycling businesses.
- DTSC inspections of recycling facilities and compliance with environmental standards are required for participant approval and eligibility to receive payments.
- The infrastructure to recover CEW also recovers substantial quantities of miscellaneous electronic waste, the handling of which is not directly funded by the CEW payment system.

CalRecycle pays approved recyclers; approved recyclers are required to pay collectors. Effective July 1, 2016, the combined recovery and recycling payment rate is \$0.49 per pound.

Payment Statistics to Date:

- Approximately 3,434 claims submitted by recyclers for payment since January 2005
- Approximately \$ 875 million (representing over **2 billion pounds** of recycled *covered electronic waste*) have been claimed through the CEW payment system since January 2005
- In 2015, mean claim size: ~\$315,000; median claim size: ~\$175,000

Year to Year Comparison (based on claim reporting month):

- 2005 total 225 claims submitted: \$ 31 M (~ 65 M pounds)
- 2006 total 298 claims submitted: \$ 61 M (~128 M pounds)
- 2007 total 351 claims submitted: \$ 89 M (~185 M pounds)
- 2008 total 412 claims submitted: \$ 96 M (~218 M pounds)
- 2009 total 315 claims submitted: \$ 73 M (~186 M pounds)
- 2010 total 254 claims submitted; \$ 75 M (~194 M pounds)
- 2011 total 303 claims submitted; \$ 77 M (~ 198 M pounds)
- 2012 total 318 claims submitted; \$ 83 M (~ 212 M pounds)
- 2013 total 279 claims submitted; \$ 79 M (~ 202 M pounds)
- 2014 total 275 claims submitted; \$ 77 M (~ 184 M pounds)
- 2015 total 247 claims submitted; \$ 77 M (~ 175 M pounds)
- 2016 thus far ~157 claims; ~\$ 57.2 M (~122.7 M pounds) – *Not a complete year*

CalRecycle has annually denied between 1% and 12% of moneys claimed in the CEW system due to non-compliant or "significantly inconsistent" documentation (see [14 CCR 18660.30...](#)). Current total payment denial is about \$42 million (~5% of claimed) over life of program.

Compliance Assurance and Fraud Prevention:

- CalRecycle works closely with DTSC to ensure material handling compliance. The departments have an MOU that delineates cooperation on regulatory and enforcement responsibilities.
- CalRecycle has statutory authority to impose administrative civil liabilities (penalties) against any person for false statements or representations made in documentation transferred or maintained

for the purpose of compliance with the Electronic Waste Recycling Act and associated regulations, including those related to the covered electronic waste program.

- CalRecycle maintains an IAA with the Department of Food and Agriculture's Weighmaster program to ensure accurate and legal measurements within the electronics recycling industry.

Current System Challenges

- CalRecycle must ensure that payment is made in a timely manner only for eligible and properly documented CEW; specifically, through complete and verifiable payment claims, including applicable source, collection, transfer, processing, and residual disposition documentation.
- The program must accommodate continued use (resale, reuse) as a possible destination for recovered CEW, but only pay for cancelled (dismantled) CEW.
- The program must allow for certain instances of otherwise eligible (California-sourced) covered electronic wastes resulting from illegal abandonment and load check activities to enter the payment system while simultaneously not creating a portal for fraudulent activities.
- The use of "handlers" outside the formal CEW system by approved recyclers and collectors exposes system participants to increased risk of faulty and/or falsified collection documentation.

Uncertain Markets for Residual CRT Glass:

- Residual CRT glass must be managed as a universal waste or as a hazardous waste depending on ultimate disposition of the glass; the burden of compliance is on the California glass handler.
- **Historical markets for residual CRT glass have largely disappeared or have been disrupted;** new markets are unclear and involve more complex regulatory consideration.
- Incidents of residual CRT abandonment elsewhere in USA further raise market concerns.
- New recycling dispositions should be explored but must be vetted; meanwhile, well-regulated disposal has become a last choice option for residuals without feasible markets.

Costs of Managing Non-CRT CEW:

- Program is seeing increase in of non-CRT devices, which have different recycling economics
- Approximately 98% (by weight) of CEW claimed in 2013 were CRT devices
- Approximately 95% (by weight) of CEW claimed in 2015 were CRT devices

The Future of Electronic Waste Management in California?

- Mixed e-waste (non-CEW) volumes are substantial and in aggregate have nominal value.
- CEW collectors and recyclers are handling more complex and lower value materials.
- Will the current model that has worked well for over a decade work for another ten years?
- CalRecycle has initiated a process to examine the strengths and vulnerabilities of approaches.
- Open conversation will take months, perhaps years, but it's time to begin looking ahead.

Other Program Implementation Activities

Regulations:

- DTSC readopted [emergency regulations](#) in September 2016 for residual CRT glass management (originally adopted October 2012) that creates pathways to recycling alternatives and the possibility of proper disposal, as well as established more stringent disposition documentation.
- In August 2015 CalRecycle enacted [emergency rules](#) pursuant to the Act to address changes in CRT market conditions and CRT management rules promulgated by DTSC; CEW recyclers may pursue all otherwise legal dispositions for residual CRTs/CRT glass derived from claimed CEW.
- In October 2015 CalRecycle enacted [emergency rules](#) to implement administrative authorities to impose civil liabilities (penalties) on persons who make false statements in documents maintained or transmitted for compliance purposes relative to the Act. (PRC 42474(d)).

Recent Legislation:

- For more legislative information, see: <http://leginfo.legislature.ca.gov/>

Annual Net Cost Reporting:

- Program participants must report annually on costs to handle and process CEWs if so directed by CalRecycle. This information is used to inform CalRecycle in fulfilling its obligation to adjust payment rates pursuant to PRC 42477 and 42478.
- Net Cost Reports covering 2015 operations were required to be submitted by all CEW program participants on or before March 1, 2016.
- Failure to submit a Net Cost Report is a leading cause of participant approval revocation.
- Effective July 1, 2016, the recovery payment rate increased from 18 to 19 cent per pound. The combined recovery and recycling payment rate increased from 44 to 49 cents per pound.

Other States and Federal Government:

California is monitoring activity on the national level. Approximately two dozen states have passed legislation, all taking more of a producer responsibility approach. A large CEW program challenge -- ensuring payment only for California material -- would be minimized or eliminated by a national-level program. However, any national system should provide cost relief to local governments and not contradict the hazardous waste/universal waste management standards adopted by DTSC. The Act specifies conditions under which a national program would preempt the Act (PRC 42485 (a)).

Outreach and Other Resources:

- CalRecycle maintains a public oriented web address (www.eRecycle.org) to inform the public on environmental matters associated with the management of electronic waste, including a directory of recycling opportunities throughout California.
- The Board of Equalization website contains Frequently Asked Questions, registration information and registration forms. (www.boe.ca.gov/sptaxprog/ewaste.htm)
- The Department of Toxic Substances Control website contains information on covered devices, hazardous waste management standards, and regulatory requirements. (<http://www.dtsc.ca.gov/HazardousWaste/EWaste/>)

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***Comments on Quarterly Claim Chart (Next Page)**

The depiction of claim volumes in the chart reflects the general growth of the program since its inception in January 2005. Factors affecting the fluctuating volumes in the program include infrastructure development, a lowered payment rate (effective July 2008), economic uncertainty, the digital television broadcast transition in the first half of 2009, and the fundamental availability of recycling opportunities over the past ten years that has recovered much of the legacy stockpile.

Recyclers must ship CRT glass compliantly to an appropriate destination or disposition prior to submitting a CEW claim. CRT glass market disruptions in October 2009 involving Mexican destinations dramatically impacted claim submittals beginning 4th quarter 2009. The industry recovered, but current CRT glass market uncertainties, most significantly the stable access to CRT manufacturing, are impacting recyclers' ability to submit claims regularly. Additionally, it appears that CEW volumes (pounds), primarily comprised of CRT devices, are tapering off even as the amount of non-CRT devices increases.

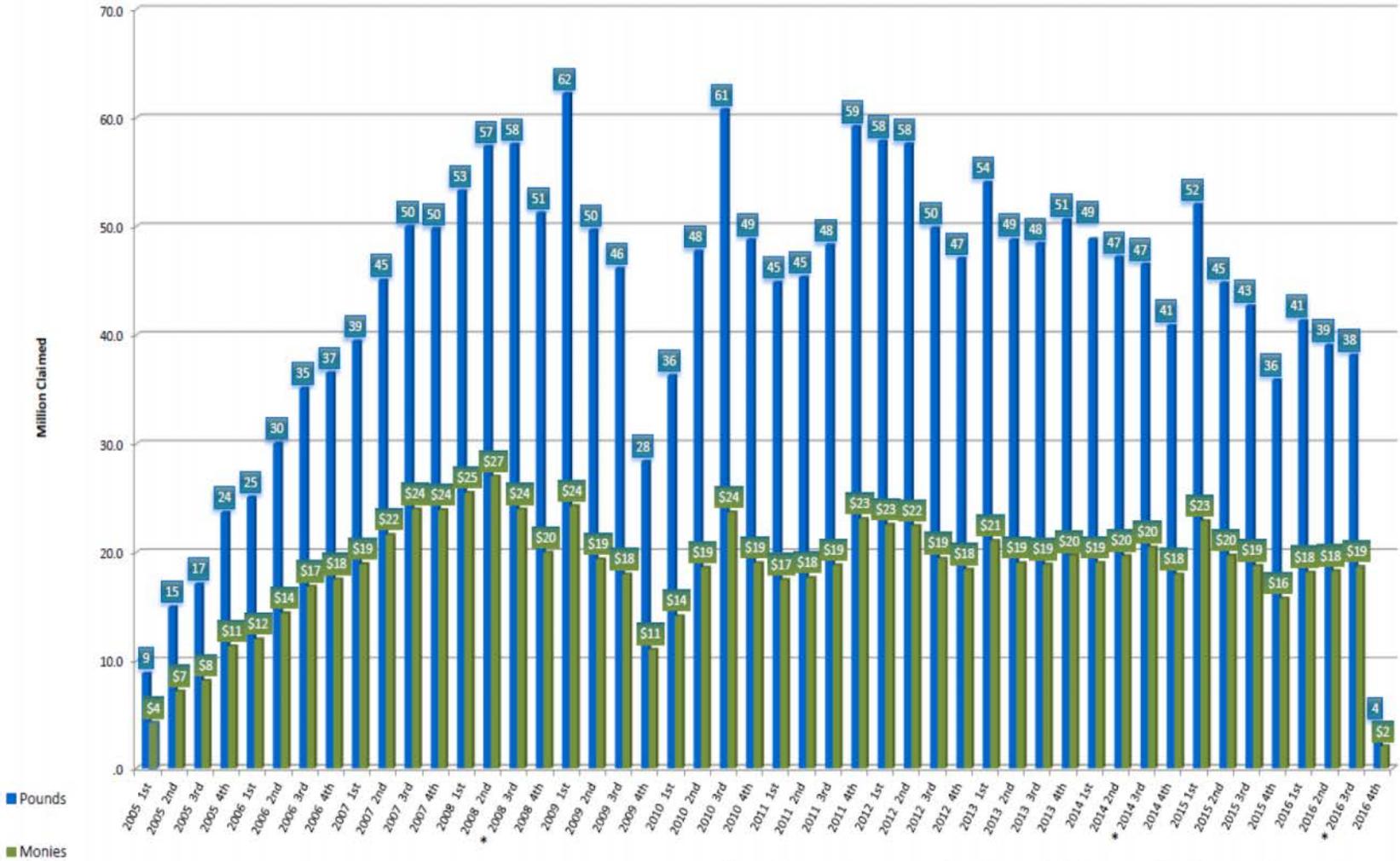
Recyclers are required to submit claims within 45 days of the end of a claim reporting month, which leads to a delay in the tracking of program volumes. For instance, November 2016 claims aren't technically due until approximately January 15, 2017.

Question concerning this document may be directed to Jeff Hunts, Program Manager, at (916) 341-6603 or jeff.hunts@calrecycle.ca.gov

Covered Electronic Waste Recycling Payment System

Quarterly Monies and Pounds Claimed

(as of December 1, 2016)



* Change in the standard payment rate effective 3rd quarter 2008, 3rd quarter 2014, and 3rd quarter 2016, respectively.

(* See Chart Comments on Previous Page)

Covered Electronic Waste (CEW) Recovery & Recycling Payment System

