

Background on Covered Electronic Waste Payment Rate Considerations

Introduction

This background document provides information in support of a Request for Approval (RFA) to approve proposed adjustments to the covered electronic waste recovery and recycling payment rates.

The Electronic Waste Recycling Act of 2003 (SB 20, Sher), as amended, was a set of targeted approaches within a larger effort to better manage electronic equipment and devices discarded in the state of California. It established a variety of measures intended to develop an infrastructure to provide convenient recycling opportunities, reduce the inappropriate disposal of certain electronic devices, limit the sale of certain hazardous products in the state, and require notification and/or reporting of product sale and waste management activities.

The most publicly visible aspect of the Act is the covered electronic waste (CEW) recovery and recycling payment system, administered by the Department of Resources Recycling and Recovery (CalRecycle), in partnership with the Department of Toxic Substances Control (DTSC) and the Board of Equalization (BOE). This system is funded through a fee paid by consumers of covered electronic devices at the time of retail purchase, and is operated to compensate authorized collectors and recyclers of CEW through standard payment rates designed to offset the average costs of providing recovery and recycling services.

CalRecycle has the responsibility and authority to evaluate the standard statewide CEW recovery and recycling payment rates every two years and to adjust them as warranted to reflect the average net costs of providing the CEW recovery and recycling services intended and prescribed by the Act. The payment rates have been adjusted twice since the program's operational inception: once to reduce the rates in 2008, and once to raise the rates in 2014. Presently, any decision to adjust the payment rates must be made by the statutory deadline of July 1, 2016.

Based on an analysis of information submitted through required industry reporting, as well as stakeholder input, ongoing monitoring of industry trends, and the inclusion of the reasonable rate of return analyzed and discussed in May 2008 and June 2014, when the payment rates were last adjusted, program staff is recommending that both the recovery and the combined recovery and recycling payment rates be increased.

Background Information

The Electronic Waste Recycling Act of 2003 (Act), established a comprehensive program to finance the end-of-life management of certain (covered) electronic devices. The program is financed through an electronic waste recycling fee paid by consumers at the point of retail sale of new covered devices. These revenues are used to administer the programs established by the Act, including the disbursement of recovery and recycling payments to approved collectors and recyclers of CEW.

CEW are discarded covered electronic devices. Covered electronic devices are defined by statute as video display devices with a screen size greater than four inches that are identified by DTSC after testing determines that they are hazardous when disposed. DTSC must incorporate covered devices in regulation (Title 22, Division 4.5, Chapter 11, Article 5, Appendix X) as well as make ongoing interpretations as new facets and forms of technology are assessed against existing regulation.

Currently, covered electronic devices include:

- CRT-containing devices (including CRT televisions and computer monitors);

- Liquid Crystal Display (LCD)-containing televisions and desktop monitors;
- Laptop computers containing LCD screens;
- Gas plasma display televisions; and
- Personal DVD players.

The Act charges CalRecycle with principle responsibility for administering the financial aspects of the CEW payment system. This includes establishing a rate of payment for the proper recovery (collection, consolidation and transportation) and recycling (receipt, processing and disposition) of CEW generated by persons in California. The recovery payment rate is currently set in regulation at \$0.18 per pound, and the combined recovery and recycling payment is currently set \$0.44 per pound, effectively setting the recycling payment rate at \$0.26 per pound. CalRecycle makes the combined payment to approved recyclers in response to complete and compliant payment claims that document the origin and “cancellation” of eligible CEW. Approved recyclers are required to make the recovery payment within certain timeframes to approved collectors for all eligible and properly documented CEW transferred from the collector to the recycler.

Statutory Authority to Adjust Payment Rates

The recovery and recycling payment rates were established at the outset of the CEW program through a combination of statute and emergency regulation. Initial rates were set through market research, stakeholder input, and California Integrated Waste Management Board (CIWMB, the predecessor of CalRecycle) consideration. They remained unchanged from January 1, 2005, when eligible recovery and recycling activities began, until July 2008. At that point, the CIWMB reconsidered the payment rates and determined that a reduction from a combined \$0.48 per pound to a combined \$0.39 was necessary to better reflect industry’s costs. Subsequently the combined rate was raised to \$0.44 per pound in 2014. CalRecycle, as the successor to the CIWMB’s obligations, has the authority and responsibility to revisit and establish new payment rates, as and if warranted, every two years. Pursuant to statute, CalRecycle must make any adjustment decisions on or before July 1.

Any adjustment to the recovery and/or recycling payment rates will impact the pace at which the fund is expended and will thus affect the long-term solvency of the program. However, the Act dictates that adjustment of the payment rates be guided by the average net cost of collectors and recyclers providing the services that fulfill the intent of the Act, not as a means to budget the fund. Specifically, the following sections of the Public Resources Code (PRC) will guide the CalRecycle’s actions:

“PRC 42477. (a) On July 1, 2004, or as specified otherwise in Section 25214.10.1 of the Health and Safety Code, and on July 1 every two years thereafter, the board (CalRecycle) in collaboration with the department (DTSC) shall establish an electronic waste recovery payment schedule for covered electronic wastes generated in this state to cover the net cost for an authorized collector to operate a free and convenient system for collecting, consolidating and transporting covered electronic wastes generated in this state....”

“PRC 42478. (a) Except as provided in subdivision (b), on July 1, 2004, or as specified otherwise in Section 25214.10.1 of the Health and Safety Code, and on July 1 every two years thereafter, the board (CalRecycle), in collaboration with the department (DTSC), shall establish a covered electronic waste recycling payment schedule for covered electronic wastes generated in this state to cover the average net cost for an electronic waste recycler to receive, process, and recycle each major category, as determined by the board, of covered electronic waste received from an authorized collector....”

Collaboration with DTSC

As noted in the above statutory citations, CalRecycle is required to make any adjustments to the recovery and/or recycling payment rates in collaboration with DTSC. This collaboration has been accomplished through ongoing coordination and joint implementation of the Act's provisions. Specifically, CalRecycle program staff communicates regularly with DTSC regulatory and compliance staff to discuss program progress and challenges, to ensure participant compliance, and to align programmatic efforts.

Public Resources Code (PRC) 42474.5 empowers DTSC to enforce all aspects of the Act and its implementation using DTSC's hazardous waste management authority. Furthermore, PRC 42476(f)(2) states that CalRecycle may pay an electronic waste recycling and/or recovery payment only if "...*The covered electronic waste, including any residuals from the processing of the waste, is handled in compliance with all applicable statutes and regulations,*" many of which fall under the jurisdiction of DTSC.

In October 2012, DTSC enacted emergency regulations that adjusted conditions of authorization within universal waste rules governing the management of discarded cathode ray tubes (CRTs). These rules were readopted in September 2014. This action was in response to both changing conditions in the market for residual CRT glass as well as further consideration of appropriate material management options. CRT glass management is presently a significant cost concern for CEW recyclers. Thus far the economic impact of this rule change has been negligible since CEW recycling program rules currently limit ultimate CRT disposition options. As DTSC considers finalizing the existing emergency rules, CalRecycle continues to work closely with DTSC to better understand how any new management options for CRT glass may affect overall industry costs.

Net Cost Reports Inform Payment Rate Considerations

To inform the evaluation of payment rates, regulations governing the CEW payment system allow CalRecycle to require that approved collectors and recyclers submit annual Net Cost Reports documenting revenues and costs incurred during the management of CEW within the previous calendar year. The latest cycle of reports was due to CalRecycle on or before March 1, 2016.

Specific regulatory language relating to the Net Cost Report can be found in Title 14 of the California Code of Regulations (CCR) section 18660.10. This regulation provides the context for the Net Cost Report requirement, specifically:

"(a) To adjust the statewide recovery and recycling payment rates, establish future payment schedules and adjust the consumer fees, (CalRecycle) shall periodically update information concerning the net costs of CEW recovery and CEW recycling."

Given that the nature of participating organizations varies considerably based on size, location, business model, target customer base, scope of materials handled, available markets, and other factors, there is a substantial range of costs and revenues reported. This is to be expected. The industry being fostered by the CEW payment system is well established yet continues to evolve as the collection infrastructure evolves, recycling processes are optimized, markets for derived residuals fluctuate, and as the CEW payment system itself influences how materials flow and business decisions are made. However, the vagaries of self-reporting also suggest that net cost information be considered carefully and in context.

Net Cost Report Validation

For several years CalRecycle's electronic waste recycling program retained the services of the Department of Finance (DOF) Office of State Audits and Evaluations to review the supporting documentation associated with a sampling of submitted Net Cost Reports. This review, conducted onsite at the location of the selected participants, was intended to assess whether the revenues and costs reported were substantiated (validated) by available documentation.

The validation exercise was not a standard audit. It involved a records review using procedures agreed upon ahead of time to standardize the outcome. The aim of the exercise was to determine the general accuracy and reliability of the data submitted as part of the Net Cost Report requirement. Validation subjects were selected by program staff on the general grounds that they represent a range of participant sizes and operational models.

Several previous years' Net Cost Report validation exercises made note of vulnerabilities in the reporting process, including:

- A potential to under-report revenue derived from residual sales
- A potential for related businesses to inaccurately report revenues and/or costs
- The need for more specific guidance on report preparation, especially in the area of cost allocation

As a result, CalRecycle has continuously updated and refined its approach to each reporting cycle. This has included:

- Report guidance material to clarify that generally accepted accounting methods should be used in preparation of reports
- Establishment of online reporting capabilities to ease calculations and reduce errors
- Reminders to participants that the submittal of a false report would be considered a prohibited activity

CalRecycle no longer engages DOF for an annual net cost validation exercise, and instead relies on the ongoing audit examinations conducted by CalRecycle's own internal Audits Office to assess the general accuracy of historically submitted Net Cost Reports. Not unlike DOF's finding before them, the Audits Office's work finds varying degrees of substantiation reflected in CEW program participants' Net Cost Reports. The uncertainty of any given report's accuracy is factored into program staff's consideration of available information.

Findings

Findings from the Net Cost Reports covering recovery and recycling operations conducted in 2005 and 2006 indicated that initial recovery and recycling payment rates were more than sufficient to cover the reported costs of a majority of program participants. A continuing trend of lowering net costs was identified in the reports covering 2007, arguing strongly for the reduction in payment rates that occurred in 2008. Subsequent years' reporting argued for the payment rates to remain steady until 2014, at which point CalRecycle determined that a rate increase was warranted.

An examination of Net Cost Reports covering operational year 2015 is detailed and summarized in Attachment 2 to this RFA. Once egregious outlier data are excluded from weighted average calculations, reported net costs per pound for 2015 appear to have increased when compared to the costs reported over the last several years. The most significant increases occurred in recycling costs, though a minor increase in recovery costs was also seen.

Curiously, the most substantial average net cost increases occurred within those segments of participants that represent the largest volume operations, both collectors and recyclers.

Future Uncertainties

The data contained in the annually required Net Cost Reports is a snapshot of the past. Given the timing of reporting cycles, program staff relies largely on data that reflects operating conditions that may differ from current conditions when making any recommendation regarding payment rates. An examination of past trends in factors that affect costs and revenues reveals that the one certainty is change. The potential exists for substantial changes to occur at any time in costs such as labor, transportation, facilities, and low-value residual material disposition, as well as in revenues derived from commodities such as recovered metals, plastics, and components.

By weight, CRT glass is the most significant portion of the treatment residuals derived from the cancellation of CEW. CRT glass has historically been used as a feedstock in the manufacturing of new CRT devices, or can be a feedstock to primary or secondary lead smelting, wherein the silica acts as a flux to protect furnaces and some lead in the glass can be recovered. In general these are fairly low-value uses, with the material preparation costs typically exceeding the commodity value of the CRT glass. There are a limited number of destinations within the western hemisphere seeking to use CRT glass as a smelter feedstock, and far fewer global destinations able to use CRT glass in the manufacture of new CRTs.

The availability of CRT glass disposition options may be the most significant uncertainty for current CEW recyclers and any disruption can have profound impacts. Similarly, hardships to the recycling industry could have serious upstream implications to CEW collectors.

Another uncertainty to note is the small but inexorably increasing proportion of non-CRT devices entering the CEW recycling system. While the economics of recovering (collecting) the variety of non-CRT video displays such as LCD monitors, plasma televisions, and laptop computers may be similar, the costs and values associated with their dismantling (recycling or cancellation) varies widely.

CEW claim data suggest that approximately 95 percent of claims by weight were for CRT devices in 2015. It is not known how much non-CRT CEW may have been collected and then not subsequently cancelled and claimed. For the time being, program staff possesses only summary cost data for all CEW recovery and recycling in general and, therefore, is in a position to propose only one set of payment rates. However, as more non-CRT CEW enter the payment system it is possible that expanded complexities in recycling payment rates will be required to meet statutory intent and industry needs.

Conclusions and Recommendations

Data from the most recent Net Cost Report, which is a reflection of the CEW recovery and recycling industry's costs during 2015, suggests a modest increase in payments rates is warranted. While the past several years of reported data, as evaluated by program staff, appeared to be generally stable, 2015 data indicates a noticeable increase in costs, especially among the largest operators. This is admittedly a look into the recent past and not necessarily indicative of the future costs that the industry will incur, however CalRecycle has limited ability to predict the future beyond generalities.

Based on industry cost information and associated evaluation, including the provision of an approximately 10% reasonable rate of return as analyzed and discussed as part of [Attachment 3 of Item 9](#) at the May 20, 2008 meeting

of the California Integrated Waste Management Board and the actions of CalRecycle at its [Public Meeting in June 2014](#), program staff recommends that the recovery and recycling payment rates be increased as follows:

The Standard Statewide Recovery Payment Rate, as delineated in 14 CCR 18660.33, should be increased from 18 cents per pound to 19 cents per pound.

The Standard Statewide Combined Recovery and Recycling Payment Rate, as delineated in 14 CCR 18660.34, should be increased from 44 cents per pound to 49 cents per pound.

Staff further recommends that these payment rate changes be made immediately, effective July 1, 2016, as applicable to the compliant CEW transfer and/or claim conditions contained in existing associated regulation.

Beyond this, it is acknowledged that the mix of technologies being recovered and recycled with the CEW program is evolving, with the predominant CRT devices slowly giving way to increasing amounts of flat panel displays. It is suspected that the challenge of recovering the increasingly available, and substantially lighter, non-CRT technology will impact CEW recovery dynamics. The separate challenge of identifying appropriate dispositions for regulated treatment residuals and managing the less familiar costs of recycling non-CRT CEW may be even more significant. CalRecycle will continue examining these and related issues into the future.

There is much potential for continued innovation in CEW collection models, and for increased efficiency in the transactions between collectors and recyclers. The elective practice of recyclers paying collectors more than the required recovery payment rate has continued, though at a reduced level. And some collectors are known to be paying sources or interim handlers to secure quantities of CEW. This practice does not appear to be anticipated by the intent of the Act, which was simply to develop and provide a cost-free and convenient recycling infrastructure. The practice does raise questions about the fundamental dynamics of the CEW recycling system model and whether costs are necessarily contained by market forces seeking increased profit, or whether overall system costs expand to consume available payments.

Regulatory Implications

Should program staff's recommendation to adjust the recovery and recycling payments rates be approved, CalRecycle will make the necessary filings with the Office of Administrative Law to enact the change. It is anticipated that neither a formal nor emergency rulemaking would be required.

Contingencies

Should a future cost or revenue factor change so dramatically as to jeopardize the viability of the CEW recovery and recycling industry, or the fiscal integrity of the payment system, CalRecycle and/or program stakeholders could seek Legislative action to make statutory changes allowing for the payment rates to be revisited more frequently than biennially, either as a one-time action or an ongoing authority. Such a change would require additional resources in order to survey costs and recalculate rates, but it would reduce the perceived risk of setting payments rates for two years when economic volatility is causing anxiety for industry and government interests alike.