



DEPARTMENT OF RESOURCES RECYCLING AND RECOVERY

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CalRecycle Review of the Thermostat Recycling Corporation's 2015 Annual Report July 13, 2016

At the request of the Department of Toxic Substances Control (DTSC), CalRecycle reviewed and evaluated the Thermostat Recycling Corporation's (TRC) 2015 Annual Report and found that TRC failed to meet California statutory and regulatory requirements. TRC's 2015 Annual Report provides limited discussion of how meaningful program enhancements will be implemented in 2016 to bring the program into compliance. TRC's proposed "2016 Annual Goals" do not include any discrete, new or innovative strategies that seem likely to result in significant increases in program participation or mercury thermostat collection in California. CalRecycle encourages TRC to consider implementing program modifications consistent with recommendations from DTSC, CalRecycle, as well as the "[Public Comments Received on Manufacturers' Draft Outreach and Pilot Project Plans](#)" on the DTSC website.

As a result of TRC's performance in 2014 and 2013, DTSC issued a [Summary of Violations](#) and entered into a [Consent Order](#) with 25 manufacturers participating in the TRC program effective May 10, 2016. The 25 manufacturers that signed the Consent Order developed and agreed to adhere to an [Outreach Plan](#) and [Pilot Project Plan](#), which DTSC found deficient and disapproved on July 8, 2016.

CalRecycle reviewed TRC's 2015 Annual Report and program implementation in the context of the requirements in statute and regulations taking into consideration previous review recommendations and public comments.

- 1. TRC reduced incentive payments in California by 12% in 2015. Consistent with CalRecycle's 2013 and 2014 Reviews, increasing incentive payments for each thermostat collected would likely result in increased program participation and higher collection rates.**

TRC's funding for the California program may be insufficient to support the necessary incentive payment programs needed for TRC to meet the performance requirements. As stated in CalRecycle's review of the 2014 Annual Report, California represents about 37% of households in the states where TRC operates. Given California's population, a proportional share of TRC's national program expenses (\$1,406,319) would be about \$520,000 for California operations. However, TRC estimates that only \$117,217 was expended on the California program in 2015. TRC needs to provide additional state-specific resources to adequately implement an effective program with in a state as large and populated as California.

In Maine and Vermont, a \$5 rebate is offered for each thermostat collected, which has proven to be an effective strategy to incentivize increased thermostat collection. The average collection rate per 10,000 residents in Maine is 31.9 and 34.3 in Vermont, compared to 4.7 thermostats per 10,000 residents in California. TRC's data suggests that individuals are more motivated to properly manage mercury thermostats when offered a \$5 incentive for each thermostat returned. It follows that if TRC implemented a similar program, it would likely result in increased thermostat collection in California.

Instead, in 2015, TRC implemented a Technician Loyalty Program in limited locations in California called “Recycle. Scratch. Earn!” *“The program offers a scratch card worth 600 points for each mercury thermostat returned. Each scratch card contains a unique serial number to be entered online (www.recycle-scratch-earn.com). Upon redeeming 8 scratch cards (4,800 points), participants are eligible to redeem the points for brand-name merchandise. Participants can also bank points for higher-value merchandise”* (p. 24 & 25). TRC did not provide data regarding the performance of the scratch card program, however TRC’s data indicates a decrease in the thermostat collection rate between 2014 and 2015. Therefore, it could be concluded that the scratch card program was not successful. However, collecting performance data and evaluating the effectiveness of collection strategies are important components to identifying how to improve future incentive programs.

2. **TRC’s 2015 performance does not meet the DTSC performance requirement as California thermostat collection decreased by 14% compared to 2014.** Given persistently low collection rates, and TRC’s anecdotal information regarding technicians’ dissatisfaction with the scratch card program, CalRecycle recommends development and implementation of an effective incentive program in order to increase collection rates.

TRC’s performance in collecting thermostats in California is shown below:

Year	Thermostats Collected ¹	DTSC Regulatory Performance Requirement	% of Performance Requirement met
2013	23,017	32,550	42%
2014	22,453	95,400	24%
2015	19,223	113,850	17%
2016	TBD	131,300	TBD

TRC’s Heating, Ventilating, and Air Conditioning (HVAC) Technician Survey suggests that a decreasing number of mercury thermostats are available for collection. However, with only 46 national respondents (not California-specific), the survey is not statistically significant and does not provide an accurate estimate of whether the number of thermostats available for collection has decreased. If TRC considers the current performance requirements unattainable due to anecdotal accounts of decreasing mercury thermostats available for collection, an independent, comprehensive, and statistically significant study should be conducted by TRC to substantiate these claims.

3. **TRC has not implemented an adequate education and outreach program.** In 2015, TRC reported expenditures of \$277,995 on a national marketing and outreach campaign of which \$16,618 was spent in California. In order to increase participation and collection rates, homeowners, contractors, service technicians, retailers, wholesalers, and local governments must all be educated regarding proper management of mercury thermostats and the requirements of the law. CalRecycle is willing to provide TRC with names, addresses, and phone numbers for Household Hazardous Waste Collection Facilities (HHWCF) in California that report thermostat collection on Form 303 if that would assist TRC in conducting additional education and outreach efforts. CalRecycle staff recommends that TRC increase their outreach and education efforts conducted each year to promote increased stakeholder awareness of the program.

TRC reports performing 66 California site visits in 2015, a decrease of 65% from 2014 (168 site visits) and a 73% decrease from 2013 (over 240 site visits). In addition, 87 phone calls were made “to

¹ CalRecycle notes that [DTSC’s Annual Collection Results webpage](#) reports the number of equivalent thermostat collected by TRC in 2013 and 2014 (intact thermostats plus switches), but reports only intact thermostats in 2015 (18,260 intact thermostats compared with 19,223 thermostats plus switches).

collection locations in California that had not returned a bin in more than 12 months.” Of the 202 California sites that had not returned a bin in over 18 months (appendices 9, 10, and 19), only 45 were called or visited by TRC in 2015. TRC suggests that there is not a statistically significant relationship between the number of phone calls or site visits and numbers of bins returned. However, TRC performed the majority of site visits and calls during one month, which limits the data’s utility for determining if there is a correlation between phone calls or site visits and the number of bins returned. Increasing education and outreach efforts, including the frequency of TRC’s site visits and phone calls in 2016 would help ensure all locations are abiding by universal waste storage requirements, ensure proper management of collected materials, and potentially increase program participation and collection.

4. **The TRC program does not provide convenient access to collection locations for recycling mercury thermostats in California.** Convenient access to recycling is critical to the success of a stewardship program. Although wholesalers of new thermostats in the state are statutorily obligated to act as collection locations, TRC reports that some wholesalers are failing to host a bin.

Retailers and wholesalers distributing new thermostats by mail in California are required by statute (Health and Safety Code 25214.8.14(b)) to “include with the sale of the new thermostat, an Internet Web site address and toll-free telephone number with instructions on obtaining a prepaid mail-in label that a consumer may use to send an out-of-service mercury-added thermostat to a collection location.” In order to evaluate compliance with this requirement, in the next annual report, TRC should include a list of locations that offer new thermostats by mail, as well as a description of TRC’s efforts to ensure instructions on obtaining a prepaid mail-in label are included with new thermostats distributed by mail. In addition, TRC should track the number of mercury thermostats collected by mail in order to determine if further outreach efforts are needed.

The TRC report states that, as a result of sending letters to distributor/wholesale locations in the state, 16 Keller Supply, Smardan Supply and AC Pro branches were signed up to act as collection locations. However, TRC also shared that 27 WinWholesale branches, 28 Hajoca branches, and 4 AC Pro branches that are obligated to provide mercury thermostat collection options to consumers under the law, are not hosting TRC bins and have been unresponsive to reminder postcards. The number of active collection locations may be insufficient for a state the size of California and additional collection locations should be added in order for the program to achieve its goals.

One potential option to increase the number of collection locations is to recruit additional HHW facilities that are already collecting mercury thermostats to participate in the program. As identified in Appendix 18 of TRC’s report, 22 HHW facilities returned mercury thermostats to TRC in 2015. However, there are additional HHW facilities in California that are not actively participating in the program. TRC should make a concerted effort to bring additional HHW facilities and wholesalers into the program as collection locations in 2016.