



**DEPARTMENT OF TOXIC SUBSTANCES CONTROL
REVIEW OF THERMOSTAT RECYCLING CORPORATION'S
2013 ANNUAL REPORT FOR CALIFORNIA**

August 25, 2014

The Department of Toxic Substances Control (DTSC) evaluated the report titled, "*Thermostat Recycling Corporation's 2013 Annual Report for California*" (2013 Annual Report). The following represents the DTSC's evaluation of Thermostat Recycling Corporation (TRC) Mercury Containing Thermostat Collection Program for 2013 and proposed program enhancements for 2014. The evaluation was based on information provided to DTSC in 2013 Annual Report. For further details of each TRC program element, please refer to the 2013 Annual Report (See <https://dtsc.ca.gov/HazardousWaste/MercuryThermlInfo.cfm>).

TRC Activities in 2013

Based on its 2013 Annual Report, TRC's education and outreach efforts consisted of the following:

- Mailing of postcards to 6,170 HVAC contracting businesses in California. In California, there are approximately 11,000 active HVAC contractors.
- Paid advertising targeted to HVAC contractors/technicians and distributors, included:
 - Print-based advertising
 - Web-based advertising
 - Use of "Google AdWord"
- Attending and exhibiting at trade shows represented by TRC to be relevant to California
including trade shows in the following locations:
 - Dallas, Texas
 - Orlando, Florida
 - Las Vegas, Nevada
 - National Harbor, Maryland
 - New Orleans, Louisiana
 - St. Paul, Minnesota
 - Pasadena, California
 - Phoenix, Arizona
- Website and social media presence, with focused efforts on increasing traffic to TRC's website.
- Media coverage in industry trade press

Specific Education and Outreach Programs in 2013 included:

- HVAC Technician Incentive Program: Recycle. Scratch. Win.SM in which technician participants were offered a 1 in 5 chance to win a prize (a hamburger, a knife, a flashlight, a meter, or a \$250 check card) for every one or more mercury thermostats they returned to a participating "Johnstone Supply" location.

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- Raising industry awareness
 - Media releases to HVAC trade press publications
 - Mailings to California HVAC wholesalers and contractors
 - Direct contact with senior management of eleven of the state's leading HVAC distributors
 - Email notifications of Heating Air-conditioning Distributors International members
 - Email notifications of Air Conditioning Contractors of America members
 - Program information posted on TRC website
- Additional engagement with wholesale distributors
 - Postcard notifications to wholesale locations that had not returned bins in prior 12 months
 - Visits to over 240 wholesale and retail locations that had not returned bins in prior 12 months, visits were to:
 - Verify location and container numbers of TRC provided containers
 - Train staff on program procedures
 - Encourage future participation
- Engagement with Household Hazardous Waste Collection Facilities through letters and posters mailed to 78 facilities throughout the state
- Training videos targeting HVAC contractors/technicians and wholesale distributor staff, hosted on YouTube
- Updating its social media strategy
- Partnering with Heating Air-conditioning and Refrigeration Distributors International on the "Big Man on Planet" competition to encourage members to promote the program to see who recovers the most thermostats

TRC's Proposed Program Enhancements for 2014

In the 2013 Annual Report, TRC identified a number of program modifications to be implemented in 2014. These include:

- The **addition of a full-time account representative** in January 2014 who is responsible for "increase[ing] wholesale distributor participation in the program and implement[ing] certain program modifications in California."
- The **development of a technician loyalty program** intended to increase the number of program participants and frequency of mercury thermostat returns. The program is anticipated to include:
 - Participants receiving "loyalty points"
 - Points to be redeemed for brand-name merchandise or accumulated

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- Points awarded based on number of thermostats returned (minimum of eight thermostats was anticipated to reach the minimum prize level).
- Points to expire for non-activity
- Program to be made available to eight "market leading" distributors
- Participating distributors are required to implement the program at all branch locations and actively promote it.
- TRC is to market the program via paid and earned media
- TRC is to audit returns by location and redemptions to protect against fraud and abuse of the program.
- TRC will randomly visit participating locations to verify participation and adherence to program policy and procedure.
- The Loyalty Program will be evaluated for effectiveness *in first quarter 2015*.
- **Website redesign** to include enhanced features, leading toward use with smart phones and tablets
- **Dump Bin Displays:** TRC to develop a "wrap" of its collection container for use by wholesale distributors to raise the visibility of program at HVAC wholesale distributor locations.
- Significant **updates to direct mail**, possibly including better targeting of mail, use of email, and changes in the size, timing and frequency of mailings.
- **More frequent collection location contact** through mailed reminders to collection locations that have not returned a bin within 12 months.
- TRC proposed **implementing Customer Relation Management (CRM) software** to assist with the efforts of the new account representative. Using the CRM software, TRC intends to more aggressively market the program in 2014, targeting specific distributors and contractors in key markets. The software is to enable TRC to better document program activities.
- TRC to **adjust its paid advertising strategy** - TRC also proposed updates to its online advertisements, intended *to increase click-through rates*. Reported advertising and promotion additions include:
 - Feature TRC program training video on ACHRNews.com on their "How-To" video section (New)
 - Contracting Business Magazine dedicated Email blast to subscribers in states with disposal bans, including California (New)
 - Banner ad 3x in HVACR Business Magazine's Enewsletter, a monthly newsletter that reaches more than 10,000 opt in readers each month (New)
 - Expand frequency of Google Adwords/pay-to-click campaign and geo-target the campaign to specific state landing pages enabling TRC to incorporate state-specific messaging

- Expanded Ad placements in The HVAC Goldenwest to target the HVAC channel specifically in California
- Revamp the "Big Man on Planet Award" program to include an opportunity for more winners, with the goal of doubling the level of participation
- Continue to exhibit at regional and key national industry events

DTSC Assessment of TRC's 2013 Program

In its 2013 report, TRC claimed its program as "successful" based on the increased number of thermostats collected in California in 2013 over the number it collected in 2012. TRC claims to have collected more thermostats in California in 2013 than it did in 2012. However, while TRC may have collected more thermostats in 2013 than it collected in 2012, the number of thermostats that TRC reported collecting (13,655 thermostats) was well short of the number that, according to DTSC's regulations, TRC was required to collect (32,500 thermostats) (see section 66274.5, Title 22, California Code of Regulations). By this measure, TRC's program fell far short of its 2013 performance requirement. DTSC does not consider TRC's program successful at achieving the regulatory performance requirement.

TRC also reported that it increased its overall financial investment in its program (nationally) in 2013 by more than 13 percent (%). It is impossible, based on the data provided by TRC, to attribute the effect of financial expenditures or programmatic efforts conducted and reported on a national scale to program performance in any particular state. Also it is impossible to determine the extent to which any given program element conducted by TRC was responsible for improved program performance or increased thermostat collections.

DTSC Assessment of TRC's Program Enhancements Proposed for 2014

DTSC regulations establish a performance requirement for 2014 of 95,400 thermostats. In evaluating the data and information presented by TRC on the effectiveness of the elements of the program it implemented in 2013, and the program enhancements that TRC has proposed to implement in 2014, the proposed program modifications and enhancements do not appear substantial enough to yield the amount of increased collections needed to achieve the 2014 performance requirement. TRC did not provide the amount of additional thermostats it anticipated recovering through its proposed enhancements.

- **Focus of TRC's Program and Enhancements**

TRC's selection of program enhancements is a clear indication of its stated decision to focus nearly exclusively on HVAC wholesale distributors. Maximizing the amount of collections from a sector through which the bulk of collections has been achieved has merit. However, TRC has presented no data or information that substantiates its decision to abandon any other sector that could yield increased collections. It is also unclear from TRC's report its basis for

determining that a sector is too insignificant to warrant attention or investment of efforts. For instance, in its report TRC dismisses collection of thermostats from homeowners, apparently because TRC believes that homeowners, represent only a "small segment of the market," and an insignificant source of potential collections. TRC goes on to estimate that homeowner generated thermostats represent approximately 10% of the mercury thermostats becoming waste. With thermostat collection far below the required performance rate, no reasoning was provided that justifies discounting any segment or group of possible collections.

Appendix G of TRC's report, presents the number of thermostats and switches collected at each collection location, by type. The data presented shows that as a group, HVAC wholesale distributors collected the largest number of thermostats and switches of all the groups represented. In evaluating participants each group represented in the table, all groups had higher performing individuals and lower performing individuals. It appears that TRC chose to focus its efforts on the HVAC wholesale distributors based on this data. It proposed no enhancements to improve the overall performance of other groups, or to improve performance of individuals within specific groups.

TRC presented no metrics or other information that demonstrated that its proposed enhancements could improve collections or achieve its 2014 performance requirement, or the performance requirements for future collection years.

- **Basis for TRC's Identification of Program Modifications and Enhancements**

TRC's 2013 Annual Report lacks data and information regarding the impact or effect of its program efforts on the performance of the program. TRC has proposed a number of modifications and "enhancements" to its program for 2014, but it is not clear what data forms the basis for TRC's proposed program changes. Using the data TRC presented, it is impossible to determine whether increased investment in all or only some elements will serve to improve the program's performance. What is apparent is that TRC is relying largely on the performance of the program to date to inform its modifications and enhancements. This appears to be the basis for TRC's primary focus on HVAC wholesale distributors, which, as a group, has collected more thermostats than other collection locations being used by TRC. Although continuing to focus resources and attention on HVAC wholesale distributors appears justified, what is not evident in TRC's presentation of information is an analysis of why efforts with other collectors have not been successful, and what techniques could be used to improve collections at those locations.

TRC has reports going back several years, which could also provide trend data for various sections of California, wholesaler and contractor bin location performance, and potential inference of locations with mercury thermostats.

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To be clear, DTSC is not advocating that TRC focus its efforts on options that will not yield collections. However, DTSC sees evidence in the information presented by TRC to indicate that the groups or sectors that TRC has chosen to not focus on could yield additional collection with added attention and investment of TRC's efforts similar to TRC's proposed added focus on HVAC wholesale distributors.

DTSC Comments on TRC's Observations About the California Program:

- *"HVAC wholesale distributor participation remains essential to overall program success."*

DTSC Response: As discussed above, TRC's data indicates that the collection in California from HVAC wholesale distributors has outperformed other groups based on TRC's current program. TRC has not, however, demonstrated that additional investment in other groups could not yield as many or more thermostats.

- *"TRC determined that targeted, non-monetary incentives can positively impact collections."*
 - *"Monetary incentives are not necessary."*
 - *"Wholesaler engagement is essential."*
 - *"Incentive programs do not have to be continuous."*

DTSC Response: TRC's data indicates that use of a non-monetary incentive may improve collections as compared to no incentives at all. However, TRC has not done a comparative analysis of the performance of non-monetary incentives versus monetary incentives, or an analysis of the performance of different sizes or scales of incentives, to determine the optimal size of incentives, whether monetary or non-monetary.

- *Site visits and mailed correspondence yield equivalent results in container returns. "There is no evidence to date (including visits in other states) that location visits by TRC representatives stimulate participation among locations that are not actively participating."*

DTSC Response: TRC's data set is too limited to substantiate this claim. TRC has not examined whether the type, frequency, or duration of site visit may also play a factor in stimulating participation. TRC has not explored utilizing both site visits and mailed correspondence to stimulate participation and maximize results. TRC has also not examined whether its statement applies only to HVAC wholesale distributors, but not to other groups.

- *Distributors and others within the [program] will need to do more than required by current law.*

DTSC Response: TRC has offered no factual support for this claim.

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- *"Direct participation by larger HVAC contractors remains low in California."
"Technicians from larger contractors visit wholesale distributors less frequently."
"TRC sees an opportunity to increase collections by engaging this market segment."*

DTSC Response: TRC's observation appears to contradict its proposed program enhancements that continue or increase its focus on HVAC wholesale distributors.

- *"HHW participation in the program remains problematic."*

DTSC Response: TRC has proposed no changes to address the HHW participation. This appears to be inconsistent with TRC's proposed changes in response to a similar circumstance. TRC identified a low participation rate by a particular group (HVAC contractors), and has proposed to "engage in this market segment" to increase collections. In contrast, TRC has also identified a low participation rate by household hazardous waste collection facilities, yet TRC offered no program modifications or enhancements to improve collections from this group. TRC has offered no explanation for these different responses to similar observations.

- *"TRC recommends" DTSC eliminate the "...requirement for C-20 contractors to provide CSLB numbers when returning mercury thermostats."*

DTSC Response: DTSC's intent in requiring C-20 contractors to provide CSLB numbers when returning mercury thermostats was to improve contractor compliance with the thermostat collection requirements. DTSC continues to believe that contractors' providing their license number gives TRC a data set from which they can glean additional data to help inform decisions on future program modifications, and DTSC a data set through which additional compliance efforts can be targeted.

DTSC Summary/Conclusions

The number of thermostats collected by TRC in 2013 was well below the 2013 performance requirement. The performance requirement for 2014 is 95,400 thermostats. TRC has presented no information or data that demonstrates that its proposed program modifications and enhancements will be substantial enough to yield the increased collections. In order to justify its programmatic decisions, TRC must gather data and develop meaningful metrics to allow the assessment of its efforts in California and to guide future decisions to enhance or modify its thermostat collection program.