

**DEPARTMENT OF TOXIC SUBSTANCES CONTROL  
REVIEW OF THERMOSTAT RECYCLING CORPORATION'S  
2014 ANNUAL REPORT FOR CALIFORNIA**

The Department of Toxic Substances Control (DTSC) evaluated the report titled, Thermostat Recycling Corporation's 2014 Annual Report for California (2014 Annual Report). The following represents DTSC's evaluation of Thermostat Recycling Corporation (TRC) Mercury Containing Thermostat Collection Program for 2014 and proposed program enhancements for 2015. The evaluation was based on information provided to DTSC in the 2014 Annual Report.

For further details of each TRC program element, please refer to the [2014 Annual Report](https://www.dtsc.ca.gov/HazardousWaste/Mercury_Collection_Results.cfm) (or [https://www.dtsc.ca.gov/HazardousWaste/Mercury\\_Collection\\_Results.cfm](https://www.dtsc.ca.gov/HazardousWaste/Mercury_Collection_Results.cfm)).

**TRC Activities in 2014**

Based on its 2014 Annual Report, TRC's education and outreach efforts consisted of the following:

- Encouraging collection point participation by:
  - Mailing 1,339 postcards and 682 special mailers (Mouse Pad Mailers) to Heating, Ventilation, and Air Conditioning (HVAC) contracting businesses (or businesses with ten or more employees) – In California, there are approximately 11,000 active HVAC contractors.
  - Mailing 211 and 187 reminder postcards in July and in September (respectively)
- 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 considered to be relevant to California including trade shows in the following locations:

- Detroit, MI
  - Pasadena, CA
  - New Orleans, LA
  - Nashville, TN
  - San Francisco, CA
  - Las Vegas, NV
  - San Antonio, TX
  - New York, NY
- 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 Program for 2014 included:
    - HVAC Activities:
      - HVAC Technician Loyalty Program: TRC implemented again its loyalty program at select wholesaler distributor locations offering 600 points for each mercury thermostat returned. Participants that earned 4,800 points (by collecting 8 mercury-added thermostats) were eligible to redeem

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points for brand-name merchandise or bank points. Six wholesale distributors participated in the program. (For this year program, participants were instructed to return bins prior to launching the program.)

- HVAC Contractor Outreach: TRC implemented a strategy to engage 198 small (less than 10 employees) HVAC businesses through letters and posters to remind the HVAC technician to “recycle every mercury-added thermostats and informed them of the new HVAC technician loyalty program.”
- Household Hazardous Waste (HHW):
  - TRC implemented a strategy to engage HHW facilities to increase their participation which included the following:
  - TRC mailed over 200 encouragement letters, custom flyers, and 2015 calendars.
  - TRC is in discussion with Clean Harbor a major HHW operator to see if they would divert mercury-added thermostats from regional facilities to the TRC program.
- Demolition and Remediation Contractor Outreach:
  - TRC implemented a strategy to engage demolition and remediation contractors by mailing twice; one time to 57 contacts and another to 98 contacts. TRC claims to have received no responses from either letter.
- Wholesale Distributor Gift Cards Promotion:
  - TRC implemented a promotional strategy by partnering with a privately owned HVAC distributor. The limited-time promotion offered a \$5 gift card to In-N-Out Burger for every 5 mercury-added thermostats returned. 1,000 gift cards, posters, flyers, and newsletter copy were used to market and promote the program.
- Collection Site Location Engagement:
  - Visited 111 collection locations consisting of low performers and those that participated in the loyalty program.
  - Visited 168 HVAC wholesale distributors and retail collection locations that had little to no participation in the previous 12 months.
  - Called 77 collection locations that had not returned a bin in more than 12 months.
  - Developed a branded display to help enhance “visibility” of the TRC program at HVAC wholesale collection locations.
  - Partner with Heating, Air Conditioning and Refrigeration Distributors International (“HARDI”) to implement again “Best Man on Planet” to encourage members to promote the program to see who recovers the most mercury-added thermostats.

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- Collaboration with Other California Entities:
  - California Energy Commission (CEC) – Made contact with CEC staff but TRC was not able to get program information in the CEC's E-newsletter.
  - Demand Response – Made contact with CEC staff but TRC claims to not receive any response.
  - California State License Board (CSLB) – Requested and received the C-21 and the C-20 contractor mailing list for potential mailing distribution but TRC claims it did not use the list because the list did not include contact names and because past experience has indicated that direct mailing without a contact name "result in very low open/response rate".

**TRC Modifications During 2014**

- TRC efforts to increase both the levels of participation at collection points and the frequency of bin returns resulted in numerous modifications to the collection program which included:
  - More frequent collection location contacts
  - Adding two full time employees to help increase both distributors and HVAC contractors to participate in the program.
  - Analytically evaluating the collection rates since last year (or since 2009) and claims to have found:
    - Bins returns have increased but the average number of mercury-added thermostats per shipment has decreased from last year (or since 2009).
    - Increased location visits do not correspond to increase in the frequency of bin returns.
  - Technician Loyalty/Other Promotions:
    - Gift card promotional "incentive" program or "\$5 for 5" In-N-Out Burger gift card promotions.
    - Wholesaler participation data.
    - Collection participation levels.
  - Direct Mail/Contractor Outreach:
    - Used direct mail to get large contractors to increase participation.
    - Phone "sales" showed low success rates.
    - Post cards yield no success or no response.
    - Free bin offers to help increase the response rates.
- Summary of bin return information. The returns by collection location types were as follows:
  - 1.8% returns for Contractors;
  - 3.6% returns for HHW Facilities;

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- <.2% returns for Retailers; and
- 94.3% returns for Wholesalers/Distributors.

**TRC's Proposed Program Enhancements for 2015**

- Below are several proposed modifications to the 2015 program. The report does acknowledge there may be further modifications incorporated pursuant to any resolution of the outstanding Summary of Violations (SOV) between DTSC and the TRC members. Some additional planned advertising and promotion (subject to change) include:
  - 1/8pg two-color ad in Indoor Comfort News for 6 months
  - 1/4pg full-color ad in HVACR Business Magazine for 3 months
  - 1/4pg full-color ad in Distribution Center Magazine for 2 months
  - 1/2pg two-color ad in HVAC Insider Goldenwest for all 4 issues
  - Banner ad on HVAC-Talk.com for 4 months
  - Contracting Business Magazine dedicated Eblast
  - Banner ad on HVACR Business Magazine's website for 3 months
  - Banner ad in HVACR Business Magazine's Eblast for 3 months
  - Banner ad in Distribution Center Magazine's Eblast for 3 months
  - Banner ad on ACHRNews.com for 3 months
  - Banner ad in ACHR News' Eblast for 8 weeks
  - Banner ad in the AHR Expo wrap-up Enews
  - Text ad in NATE's Enewsletter for 2 months
  - Expand frequency of Google Adwords/pay-to-click campaign
  - Continue to exhibit at regional and key national industry events.
  - TRC plans on continuing efforts to engage larger contractors and HVAC wholesale distributors

TRC has updated its direct mail strategy and has already developed new "miss-you" postcards. These reminders will be mailed three times during 2015 to locations who haven't returned a bin within 12 months. TRC also plans to send a direct mail postcard to smaller contractors in the state within 5 miles of a participating loyalty program location (Exhibit 45 in the report).

**DTSC Assessment of the TRC's 2014 Program**

In its 2014 Annual Report, TRC failed to collect the required number of mercury-added thermostats for 2014 and reported collecting 22,453 out of the required 95,400 thermostats (See §66274.5, tit. 22, Calif. Code of Regs.). By this measure, TRC's 2014 program fell short like it did in 2013.

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**DTSC Assessment of TRC's Program Enhancements Proposed for 2015**

DTSC regulations establish a performance requirement for 2015 of 113,850 mercury-added thermostats. In evaluating the data and information presented by TRC on the effectiveness of each program element implemented in 2014, and the program enhancements that TRC has proposed to implement in 2015, the proposed program modifications and enhancements do not appear substantial enough to yield the amount of increased collections needed to achieve the 2015 performance requirements. TRC did not provide the amount of additional mercury-added thermostats it anticipated recovering through its proposed enhancements even though DTSC clearly made note of that omission in 2014 and is doing so again for 2015.

For 2015, the thermostat manufacturers are proposing activities that are very similar to the activities that were proposed in 2014 and 2013. DTSC does not foresee a higher collection rate of mercury-added thermostats occurring in 2015, if the manufacturers continue to use the same methods. In addition, the manufacturers presented no metrics or other information that could be used to support that the proposed enhancements will improve collections or achieve the 2015 performance requirements.

As DTSC has stated on previous occasions, the manufacturers need to develop metrics that serve to provide a correlation between the elements of the program (and any proposed program enhancements) and number of thermostats that are collected. Absent data and the development of effective methods to collect data, proposals to create, expand, or eliminate program features may serve to only change the appearance of the program, but result in no appreciable increase in the collection rate. Without a set of objective data or feedback on which to make program decisions, changes made to the program that are intended to improve its collections may actually result in reduced collections.

DTSC continues to believe that expanding participation in the program beyond thermostat wholesalers is essential for the program to achieve success. The proposed program enhancements did not include outreach or engagement with other potential program participants, such as general contractors, consumers, or metal or scrap recyclers, and only included limited outreach to demolition and HVAC contractors. Integrating participation by others into the program that also in some way generates or handle mercury-added thermostats is essential for the program to capture the mercury-added thermostats that are becoming waste.

DTSC still believes that the use of incentives may be a viable method for increasing the collection of thermostats. As with other proposals, DTSC understands that there is limited data available that could inform their use, but this is one instance where the use of "pilot projects" as proposed by the small group to gather data that could inform future efforts would be invaluable.

In summary, the program enhancements that TRC has proposed to implement in 2015 are lacking several of the key program improvements and enhancements that DTSC has recommended and is currently discussing with a subgroup of manufacturers aimed at resolving the 2013 SOV. DTSC believes that the continued collaboration and mutually

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agreeing on program enhancements or changes will not only improve the performance of the program and result in increased collections in California, they will also provide vital program performance information that the manufacturers and DTSC need to guide the program's efforts.

**DTSC Summary/Conclusions**

The performance requirements for 2013 and 2014 were 32,550 and 95,400 mercury-added thermostats respectively and for 2015, it is 113,850 mercury-added thermostats. TRC has presented no information or data that demonstrate that its proposed program modifications and enhancements will be substantial enough to yield the increased collections. TRC must expand its program participation efforts to other generators/handlers of mercury containing thermostats beyond wholesalers and must gather data and develop meaningful metrics to allow the assessment of its effort in California.