



RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

OFFICE OF CUSTOMER & TECHNICAL ASSISTANCE

235 Promenade Street
Providence, Rhode Island 02908

DATE: July 30, 2021

TO: Mercury Thermostat Stakeholders

FROM: Ann Battersby, Office of Customer & Technical Assistance

SUBJECT: RIDEM Response to Comments and 2021-2022 Final Thermostat Collection Goals

Thank you for your comments on the proposed annual collection goals for 2021 through 2022 for out of service mercury-added thermostats in Rhode Island. The final goals presented in this document have been established in accordance with RIGL 23-24.9-10.2(b)(3).

Section 1: RIDEM Response to Comments

The Department of the Environmental Management (RIDEM) received 1 written comment in response to our April 26, 2021 publication.

Comments from Thermostat Recycling Corporation (TRC) were received on May 26, 2021. RIDEM's response to TRC's comments are as follows:

- A comment was made by TRC that setting a collection goal halfway through the year for 2021 that is higher than the previous target is unreasonable. In response to that comment, RIDEM is setting the annual collection goal for 2021 at 4000. We are also setting the goal for 2022 at 4000. See Section 2 - Adoption of Final Goals". These goals differ than those suggested in the 2014 NRDC SERA report for the State of RI and in the April 26, 2021 memo to stakeholders. The 2014 SERA report suggests that the annual average flow of mercury thermostats for years 2020-2024 is 9800 thermostats annually. RIDEM considered the SERA values to reflect a much higher number of thermostats available for collection than was reasonable for consideration when proposing the 2021-2022 collection goals. In addition, these final goals are consistent with your collection rates from 2015-2020 and collection rates prior to the pandemic.
- A comment was made by TRC stating that the thermostat collection program is successful when HVAC wholesalers and contractors meet their obligations. TRC is concerned with the lack of enforcement and targeted outreach by RIDEM with HVAC wholesalers and contractors. The lack of outreach and enforcement continues to affect TRC's collection rates and ability to reach collection goals. The RIDEM understands that the "shared responsibility" model among its

numerous partners (manufacturers, wholesalers, homeowners etc.) is key to the success of the program. RIDEM wholeheartedly agrees that HVAC wholesaler and contractor behavior is a critical component to the success of TRC's collection efforts. RIDEM continues to be challenged on the best methods to reach this particular community in ways that will impact behavior on a daily basis. We are committed to exploring outreach opportunities with TRC on how to address this.

- TRC states that a claim that “hundreds of thousands of thermostats still exist in RI” is an overstatement. As stated in the August 31, 2015 memo that set 2015-2020 thermostat collection goals, RIDEM used data within a 2014 SERA report to quote that “hundreds of thousands of thermostats” are in existence in Rhode Island. RIDEM used that data again in 2021 to set the 2021 and 2022 collection goals. RIDEM considered the SERA values to reflect a much higher number of thermostats available for collection than was reasonable for consideration when proposing the 2021 and 2022 collection goals. That being said, the proposed goals in Section 2 are still lower than what is suggested in the 2014 SERA report. Based on existing information from other states and TRC's past performance in RI, RIDEM believes that the goals as proposed in Section 2 are reasonable.
- TRC stated that RIDEM staff are quoted as saying that TRC has collected 33,066 thermostat equivalents (whole intact thermostats and mercury loose switches) from 2011-2019. The information provided in the April 26, 2021 memo does state the total rate of collection from 2011-2020 that includes both whole intact thermostats and mercury loose switches. However, the thermostat collection program in Rhode Island is based on the collection of whole intact thermostats. The rate of collection of whole intact thermostats is what is used to assess the establishment of collection goals for 2021 and 2022 found in Section 2 of this memo.
- Based on existing information from other states, TRC's past performance in RI, market information and IMERC data on mercury thermostats, RIDEM believes that the goals adopted in Section 2 are a reasonable, balanced prediction of the number of thermostats available for collection in RI.

Section 2: Adoption of Final Annual Collection Goals (2021-2022)

Based upon the review of past performance of TRC's collection program in RI, similar collection programs operating in other states, and information provided to RIDEM by stakeholders, RIDEM is hereby formally adopting collection goals for 2021-2022 as detailed herein. These goals differ than those suggested in the NRDC SERA report for the State of RI, and the suggested goals described in the April 26, 2021, memo. RIDEM considered comments made by TRC and has reduced the original proposed goals.

RIDEM believes that the implementation of improvements as suggested in Section 1 above and comments received by the Department in conjunction with a growing emphasis on energy efficiency programs in RI will lead to increases in the number of out-of-service mercury-added thermostats recycled in future years.

Based on the comments above, RIDEM is formally adopting the following annual collection goals as set forth below in accordance with RIGL 23-24.9-10.2(b)(3):

YEAR	FINAL THERMOSTAT COLLECTION GOALS 2021-2022
2021	4000
2022	4000

RIDEM would like to acknowledge its longstanding relationship with TRC. TRC should be proud of its comprehensive collection program in RI and the results that the program has achieved.

- 1) Attachments - Comment Letter from Thermostat Recycling Corporation dated May 26, 2021.



355 Lexington Avenue - 15th Floor | New York, NY 10017 | thermostat-recycle.org

May 26, 2021

Ms. Ann Battersby
Senior Environmental Scientist
RIDEM Office of Customer and Technical Assistance
235 Promenade St.
Providence, RI 02908

RE: TRC comments regarding Rhode Island DEM April 26, 2021 Memorandum Concerning Proposed, 2021-22 Collection Targets for Out-of-Service Mercury Containing Thermostats

Dear Ms. Battersby:

Please find herein comments from the Thermostat Recycling Corporation (TRC) regarding the April 26th announcement by the Department of Environmental Management (DEM) of proposed, statewide collection goals for mercury-switch thermostats for the years 2021-22.

As you know, the TRC is a nationwide program funded and operated by manufacturers for the sole purpose of recycling mercury thermostats. The program has functioned successfully in Rhode Island for many years and will continue operating its collection sites into the foreseeable future, regardless of whether the statutory mandate to do so remains in place.

TRC acknowledges the department's authority under the law to set collection goals, but we view the proposed 2021-22 targets as inexplicably high, lacking empirical justification, and surprisingly indifferent to the impact of the ongoing pandemic on collection activities. Since early 2020, COVID 19 has had a chilling effect on commercial activity and consumer behavior throughout the nation. Recycling programs of all types experienced drastic declines in collection totals and the trend has not yet reversed as the US slowly returns to pre-pandemic conditions. For that reason alone, we see no rationale for setting a 2021 target *almost halfway through the year* that is higher than any previous annual target.

The proposed goals rely on highly questionable empirical evidence and are at odds with the trend clearly observable in other states. Additional observations on DEM's proposal are presented below.

Mercury Thermostat Collection is a Shared Responsibility

Since passage of the RI thermostat collection mandate in 2010, the TRC has conferred regularly and productively with DEM staff on measures to optimize the program's performance in the state. This open communication leads to mutual understanding of the obstacles to higher thermostat collections and

helps direct program resources to their most productive use. The manufacturers view this ongoing relationship as a key element in the program's success in Rhode Island thus far.¹

As in the past, continued growth in collections depends on several key factors, the most important of which is the extent to which *all parties* meet their obligations under the statute and participate effectively in the program. In Rhode Island, manufacturers provide a statewide, accessible collection program, but HVAC wholesalers and contractors are legally obligated to serve as collection points, and "any contractor who replaces a mercury-containing thermostat from a building" must recycle that thermostat.² The extent to which Rhode Island actively enforces the obligations of wholesalers and contractors is unclear.

Collection goals in Rhode Island will be attainable only if the party closest to the disposal decision – the contractor – complies with the legal obligation to recycle. Similarly, wholesalers can accept and maintain a TRC-provided collection bin, but it provides no value to the program unless staff at the wholesaler outlet monitor and promote the program and return the bin regularly. Without a high level of compliance at these two levels, even the most expertly planned and executed program by manufacturers will struggle to meet even modest goals. This was true when DEM set its earlier year collection goals and remains true today – not just in Rhode Island but everywhere the TRC operates.

TRC can find no mention whatsoever in DEM's memorandum about the role of state authorities in enforcing the statutory obligations on any parties *other than* manufacturers in the state. We remind DEM again that the vast majority of mercury thermostats in use in Rhode Island were sold decades ago and manufacturers remain two – possibly three – steps removed from the parties handling the devices at end of life. Manufacturers thus have no authority over those whose decisions most directly affect the achievement of collection goals.

In addition, the Rhode Island DEM has a clearly defined obligation under the statute to "conduct an education and outreach program directed toward wholesalers, retailers, contractors, and homeowners to promote the collection of out-of-service mercury-containing thermostats."³ TRC contends that regular, aggressive efforts in line with this directive, particularly aimed at increasing participation by large retail outlets, potentially could increase the effectiveness of industry outreach in that sector. Yet the April 26th memo says nothing of the department's plan to undertake such action.

Rhode Island has created a mercury thermostat collection and recycling program that requires the participation of the Rhode Island DEM in achieving the program's objectives. Setting collection goals is therefore a meaningless exercise if it is left to manufacturers alone to ensure their achievement. In fact, state and local governments also have the tools and responsibility for promoting the behavioral changes that lead to higher collections.

Concerning Mercury-Switch Thermostats Collected and Remaining in Use

¹ DEM evidently shares this view, as department Director Janet Coit noted in a letter earlier this year to Senate President Dominick Ruggerio: "we applaud (the TRC's) success and look forward to continuing working with them to make our program as successful as can be for Rhode Islanders."

² Section 23-24.9-9(f) of the RI General Laws (RI Mercury Reduction and Education Act)

³ *Op cit.*, 23-24.9-10.2(b)(2)

The DEM memo asserts that “*hundreds of thousands of mercury-added thermostats are still in use in Rhode Island homes and businesses*” (emphasis added.) The basis for this statement, as reported in subsequent correspondence between DEM staff and TRC representative Joan Milas, is a February 2014 NRDC report that employed the so-called “Skumatz study” methodology for determining the number of mercury thermostats remaining in place and the “flow” of units coming off the wall annually.

Setting aside the relevance of a highly disputed, 7-year old study as the sole empirical reference for a policy proposal, the DEM is evidently drawing inaccurate conclusions from the findings of the report. At the same time, the message from DEM staff presents an accounting of TRC’s past performance in the state that differs from the department’s own recent report to the legislature.

In the message to Ms. Milas, DEM staff contended as follows.

“ . . . that there are (sic) a total of 258,381 estimated number of thermostats in place in both residential and commercial properties in the state of Rhode Island. That number was an estimate in 2014. According to TRC’s 2019 annual report, a total of 25,264 thermostats have been collected by TRCs collection program from 2007-2019. If you take the 258,381 estimated in 2014 and subtract the total collected 25,264, we still have an estimated 233,549 thermostats in both commercial and residential properties across the state. (Emphasis added.)

Proceeding from the study’s claim that roughly 258,000 mercury thermostats were in place 7 years ago, the appropriate next step would be to adjust that by the study’s **projected flow rate** of thermostats being removed from service each year, not the number supposedly collected by TRC over the period which, in addition, does not include those mercury thermostats disposed of by householders, business owners, contractors, etc. in a manner that does not comply with Rhode Island’s statutory requirements. The NRDC report contends the annual out-of-service flow rate is just over 10,000. Subtracting the approximately 70,000 units⁴ removed from service since 2014 from the total estimated to be in place at the time of the study leaves a remainder of about 188,000 - which again is yet another **estimate** drawn from a single study that employed a controversial methodology.

The claim therefore that “*hundreds of thousands*” of mercury-switch thermostats remain in use is an overstatement. A more appropriate characterization would be along the lines of “*a study funded by an environmental advocacy group in 2014 projected that close to 200,000 mercury-added thermostats would still be in use in 2021,*” while noting that the study has not been revisited or its findings verified in the interim.

As to TRC collections, the statement that “*a total of 25,264 thermostats have been collected by TRCs collection program from 2007-2019*” is in direct conflict with information provided by DEM Director Janet Coit to Senate President Dominick Ruggerio less than 3 months ago. In a letter assessing the status and future of the TRC in Rhode Island, Director Coit stated that:

“(TRC’s) success has resulted in the collection of 33,066 thermostat equivalents (whole intact mercury thermostats and mercury loose switches) between program years 2011 and 2019.”⁵

⁴Regardless of whether the units were recycled, they were still removed from service.

⁵ Letter dated March 5, 2021 from Janet Coit to Honorable Dominick J. Ruggerio re: Mercury Reduction and Education Act (RIGL §23-24.9-10.3)

Thus, in advising the legislature, the Director reported significantly more thermostats collected by the program over a markedly shorter period of time than did DEM staff in a response to a recent industry inquiry.

It is absolutely appropriate for Director Coit to cite the collection of “thermostat equivalents” in her letter as many loose, mercury ampules find their way into TRC bins and their recovery goes to the essential goal of the program – to keep mercury out of the waste stream in Rhode Island. Failure to account for loose switches when determining collections is improper and shortchanges program performance.

TRC also reminds DEM of the reality that sale and distribution of mercury-switch thermostats was banned in Rhode Island as of January 1, 2006,⁶ meaning no new installations have occurred in the state for more than 15 years. Meanwhile, over the same period energy efficiency and carbon reduction have attained highest priority status in policy agendas at all levels of government, affecting consumer preferences and creating incentives for new heating and cooling systems. This factor - not accounted for by the 2014 NRDC study – has undoubtedly led to more rapid change-out of mercury-switch thermostats for newer, more efficient models. As energy efficiency and carbon reduction goals are rolled out, DEM should engage directly with citizens to inform and educate them regarding their legal obligations to properly dispose of their mercury-containing thermostats.

DEM Goal Setting Process

DEM’s April 26th memo speaks vaguely about the activities undertaken to determine what the proposed collection goals should be for 2021-22. The memo states the department “*took into account the effectiveness of collection programs for out-of-service mercury thermostats in Rhode Island from years 2015-2020 as well as other state’s collection programs.*” DEM also claims to have reviewed “*collection requirements in other states, relevant reports and studies in other states/nationally, and other relevant reports and studies,*” although no such reports/studies are cited, and no specific states are mentioned.

If DEM staff did confer with other state authorities, they are aware that Illinois and Iowa both took legislative action to **sunset** their mandatory thermostat collection programs as of 1 January 2022, essentially the antithesis of establishing new collection goals. Massachusetts is scheduled by law to repeal its mandate for thermostat collection at the end of 2022, New York one year later. These instances provide concrete acknowledgment of simple facts affecting mercury thermostat collection, namely, that such devices have not been available for purchase for over a decade, that notwithstanding both mandated and voluntary collection programs by the manufacturers, the inability to account for non-compliant out-of-service flow rate means that significant numbers of thermostats are no longer in service and also not available for compliant collection.

Moreover, aside from Rhode Island the only states that established collection goals for TRC programs have been Illinois and California. The former drastically **reduced** the goals several years ago as a prelude to scheduling the program to sunset. California, on the other hand, has imposed and enforced goals far beyond what TRC – or any other program, run by industry or the state – could ever hope to achieve and which also emanate from the flawed, Skumatz estimation methodology. Authorities in California have

⁶ § 23-24.9-7 of the RI General Laws banned the sale or use of mercury-added products containing more than one gram (1000 mg) of mercury after 1 January 2006. Mercury content in mercury switch thermostats typically exceeds this threshold.

clearly been “outliers” in their rigid, punitive approach to the program, accomplishing nothing aside from engendering ongoing contention with industry and forcing millions of dollars of expenditures for minimal return.

Setting new, higher goals for statewide mercury thermostat collection is therefore **not consistent** with the trend observed within “*other state’s collection programs.*”

DEM’s Proposed Annual Collection Goals

Rhode Island had little if any infrastructure for thermostat collection when RIGL §23-24.9-10.2 was enacted, but it grew rapidly as the collection network emerged and awareness of the program expanded. It is now a mature program that consistently attains the highest wholesaler participation rate among all states in which thermostat collection is mandated by statute.

Based on experience observed nationwide over the past two decades therefore, TRC does not anticipate yearly thermostat collections in Rhode Island to experience further growth without widespread, vigorous intervention by State and/or local authorities. TRC plans to continue its field work later this year and such in-person visits will, as always, stimulate bin returns and boost collection numbers, but the increase will be modest and short-lived.

More significant changes might be possible, but only through 1) internal “top down” pressure from HVAC company management to make thermostat recycling a measurable performance metric, and 2) active enforcement of the statewide disposal ban on mercury thermostats. DEM can take action towards both objectives, while TRC and its member companies can affect neither. Moreover, as noted previously, DEM has not provided any indication it is prepared to undertake education and outreach activities – especially towards retailers – that could grow the program further.

Summary

In light of these factors, TRC sees no justification for DEM to impose program goals that equal and then exceed previous collection targets. The proposed goals rest on highly questionable empirical evidence and conflict with the trend clearly observable in other states.

TRC appreciates the opportunity to present these comments. While we question the necessity of setting collection goals at this time and believe the proposed goals are excessive, we remain committed to operating the program as effectively as possible and maintaining our productive relationship with DEM staff.

Sincerely,



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