SENATE COMMITTEE ON ENVIRONMENTAL QUALITY
Senator Allen, Chair
2021 - 2022 Regular

Bill No:	AB 707		
Author:	Quirk		
Version:	6/29/2021	**Hearing Date:**	7/12/2021
Urgency:	No	**Fiscal:**	Yes
Consultant:	Gabrielle Meindl		

SUBJECT: Mercury Thermostat Collection Act of 2021

DIGEST: Revises the Mercury Thermostat Collection Act of 2008 and establishes it as the Mercury Thermostat Act of 2021.

ANALYSIS:

Existing law:

1) Bans the disposal of mercury-added thermostats in solid waste landfills. (California Code of Regulations, CCR, Title 22, Division 4.5, Chapter 18)

2) Prohibits, on and after January 1, 2006, a person from selling, offering to sell, or distributing for promotional purposes, in this state, a mercury-added thermostat unless the mercury-added thermostat meets specified criteria. (Health & Safety Code (HSC) § 25214.8.2)

3) Pursuant to the Mercury Thermostat Collection Act requires a manufacturer that owns or owned a name brand of mercury-added thermostats, as defined, sold in this state before January 1, 2006, to establish and maintain a collection, transportation, recycling, and disposal program for out-of-service mercury-added thermostats, as defined. (HSC § 25214.8.10, *et seq*)

This bill:

1) States Legislative intent to modify the mercury thermostat collection program to ensure that the maximum feasible number of out-of-service mercury thermostats get collected for proper disposal as quickly and as cost effectively as possible.

2) Recasts the program as the Mercury Thermostat Collection Act of 2021.

3) Requires each manufacturer of mercury-added thermostats, or group of manufacturers, on or before March 1, 2022, to contract with a qualified third

party, as defined, to develop and implement a convenient, cost-effective, and efficient program for the collection, transportation, recycling, and disposal of out-of-service mercury-added thermostats.

4) Requires each manufacturer, or group of manufacturers, to issue a request for proposals for a qualified third party to develop and implement the program, and would require the manufacturers to consider specified factors when selecting the qualified third party.

5) Requires the qualified third party to perform specified functions, including, but not limited to, develop, implement, and update as necessary, on or before July 1, 2022, an educational and outreach campaign sufficient to inform appropriate entities about the importance of safe out-of service mercury-added thermostat collection and recycling or disposal opportunities, create and distribute informational materials about the program, and make available to a consumer, as defined, an out-of-service mercury-added thermostat collection incentive of no less than $30 per out-of-service mercury-added thermostat returned to an established collection location, as provided.

6) Requires, by April 1, 2022, the qualified third party to submit to DTSC for review and approval, as provided, a written plan for the program that addresses these requirements.

7) Requires the qualified third party to conduct a survey of specified entities to evaluate the effectiveness of the program's education and outreach campaign and to obtain collection data from each entity engaged in the collection of out-of-service mercury-added thermostats, as provided.

8) Requires the qualified third party to annually report to DTSC information regarding the program, including, but not limited to, the number of out-of-service mercury-added thermostats collected in the state during the previous calendar year.

9) Requires each manufacturer, or group of manufacturers, on or before March 30, 2022, and on or before March 30 of each year thereafter, to pay to DTSC an aggregate total of $800,000, as provided, which would be required to be deposited in the Hazardous Waste Control Account and, upon appropriation by the Legislature, would be required to be used only for the department's actual and reasonable regulatory costs to implement and enforce the act.

10) Requires each manufacturer, or group of manufacturers, on or before March 30, 2022, and on or before March 30 of each year thereafter, to pay to the qualified third party no less than $1,000,000 annually to effectively and efficiently develop and implement the required education and outreach

program and to also pay for the qualified third party's estimated annual costs to develop and implement the program, as provided.

11) Requires a group of manufacturers to notify DTSC in writing of the identity of a nonpaying manufacturer and the apportioned amount for which the nonpaying manufacturer is responsible so the department can determine each manufacturer's compliance with the act.

12) Subjects the thermostats of a manufacturer that fails to make a required payment to a sales ban, as provided, and a penalty to be assessed by the department.

13) Requires all penalties collected by DTSC to be deposited in the Toxic Substances Control Account.

14) Requires DTSC, no later than July 1, 2022, to enter into a new agreement with each manufacturer that is subject to a preexisting consent decree, statement of violation, or court order recognizing that the liability established or alleged in those consent decrees, statement of violation, or court orders is satisfied and discharged if the manufacturer makes annual payments to the Fund.

15) Requires each manufacturer, or group of manufacturers, through the qualified third party, to provide to wholesalers collection bins for collection of out-of-service mercury-added thermostats at no cost to the wholesaler, among other things.

16) Requires DTSC to determine whether a manufacturer, or group of manufacturers, has made a good faith effort, as defined, to comply with the act.

17) Requires DTSC to repeal regulations previously adopted by the department to implement the Mercury Thermostat Act of 2008.

18) Requires, on or before January 1, 2025, DTSC to report to the Legislature on the status of the program.

19) Sunsets the provisions of this bill on January 1, 2030.

Background

1) *Mercury*. Elemental or metallic mercury is a shiny, silver-white metal, historically referred to as quicksilver, and is liquid at room temperature. It is used in older thermometers, fluorescent light bulbs, and some electrical switches. When dropped, elemental mercury breaks into smaller droplets which can become strongly attached to certain materials. At room temperature,

exposed elemental mercury can evaporate to become an invisible, odorless toxic vapor. Mercury released into the atmosphere can settle in aquatic ecosystems, where it converts to methyl-mercury.

Mercury is a powerful neurotoxin which interferes with normal childhood development. The health concern it poses is well-known and severe.

According to the United States Environmental Protection Agency, when most exposures to metallic mercury occur, they occur because mercury is released from a container, or from a product or device that breaks. If the mercury is not immediately contained or cleaned up, it can evaporate, becoming an invisible, odorless, toxic vapor.

2) *Mercury thermostats*. Many thermostats sold prior to 2006 contain a mercury switch, which consists of a glass tube with mercury inside. Mercury's unique characteristics make it extremely effective as a switch in a thermostat. Because of its excellent conductivity and high surface tension, the mercury rolls freely inside the glass tube of a mercury switch. As it moves within the switch, the mercury opens and closes an electrical circuit, which turns on and off a furnace or air conditioner to maintain a desired room temperature.

   Mercury thermostats were sold for use in residences, businesses, and industrial settings, including as stand-alone units and as components within heating and cooling equipment.

   On January 1, 2006, the State of California banned the sale of new thermostats containing mercury.

   Though mercury thermostats have not been sold in California in 15 years, it is estimated that tens of thousands of thermostats sold and installed before then are in use and will eventually need end of life management. At four grams of mercury per thermostat, these thermostats contain between 22.5 and 46.2 tons of mercury. The mercury in those thermostats—if improperly disposed—could enter our waterways, then our seafood, and ultimately our bodies.

3) *Thermostat collection.* Mercury-added thermostats fall into a category of wastes called "universal wastes." These wastes pose a lower threat than most other hazardous wastes and are generated by a wide range of sectors – thus are 'universally' generated. They cannot be disposed in solid waste landfills, but may, if handled in accordance to the universal waste regulations, be managed under less stringent management requirements than other hazardous wastes.

   The burden to manage the universal waste stream falls almost entirely on local governments. Small batteries, fluorescent tubes, and electronic wastes are also

universal wastes.

In 1998, the three largest thermostat manufacturers established the Thermostat Recycling Corporation (TRC) to run a voluntary collection program for mercury-added thermostats. According to the TRC, California was one of the top five states in terms of pounds of mercury recovered in 2006. In that same year, 5,110 thermostats containing 77.3 lbs of mercury were collected in the state by TRC. There were 129 TRC collection bins in the state during that year.

4) *Mercury Thermostat Collection Act*. In 2008, the Legislature enacted California's Mercury Thermostat Collection Act of 2008 (AB 2347 Ruskin, Chapter 572, Statutes of 2008) to require manufacturers to establish a collection and recycling program for out-of-service mercury-added thermostats. Manufacturers can operate these programs individually or collaboratively. Current law requires manufacturers to meet certain requirements, including, but not limited to, undertaking education and outreach efforts; developing educational and outreach materials; providing adequate incentives and education to contractors, service technicians; and, homeowners to encourage return of out-of-service mercury-added thermostats to established collection locations.

5) *Under performance*. Since the inception of the Mercury Thermostat Collection Act, however, collection of thermostats has been lackluster; outreach by the thermostat industry has failed to properly inform appropriate entities that collection is available, and consumers and retailers alike are wholly unaware of the program—or that mercury thermostats even need to be managed as hazardous waste.

   In 2014, manufacturers collected the equivalent of 22,178 mercury thermostats in California. The regulatory collection goal was 95,400. The following year, they collected almost 10 percent fewer thermostats—and only 16 percent of the 2015 collection goal of 113,850.

6) *Room for improvement*: One element of successful mercury thermostat collection programs in other states is an incentive provided per thermostat collected.

   In order to boost collection rates, some states, including Maine and Vermont, require manufacturers to pay a financial incentive to persons delivering mercury thermostats for recycling. In 2013, Rhode Island conducted a pilot program that set performance goals and utilized a $5 financial incentive. For 2011 and 2012, 1,416 and 1,543 thermostats were collected, respectively. For 2013 and

2014, the State program recovered 2,618 and 2,720 units, respectively, which is an increase of over 76 percent. As a result of this success, Rhode Island set even more ambitious goals for future collections. While they did not choose to continue with a financial incentive, Rhode Island law allows the State to impose a financial bounty if the program is underperforming. New York also has the authority to require manufacturers to pay a financial incentive if collection goals are not met.

According to TRC, the states with financial incentives have much higher mercury-added thermostat collection and recycling rates than the states that do not.

Comments

1) *Purpose of Bill.* According to the author, "Though mercury-containing thermostats have not been sold in this state since 2006, many buildings and homes still contain them, and given the volatility and toxicity of mercury, those antiquated thermostats need to be carefully collected and managed. The current Mercury Thermostat Collection Act of 2008 provided a statutory plan of action for collecting those thermostats before they could be mismanaged as solid waste and risk mercury contamination. However, collection efforts have failed to meet targets, and oversight and compliance has been less than sufficient due to lack of funding. AB 707 represents more than a year of conversations with the thermostat manufacturers and the environmental community to rewrite the collection program and garner greater success with mercury thermostat collection."

2) *Reinvigorates the collection of mercury thermostats.* AB 707 makes several improvements to the Mercury Thermostat Collection Program. First, it shifts the administration of the program to a qualified third party in lieu of TRC. Given TRC's general failure with collection efforts over the past decade, AB 707 proposes to hand administration and operation of collection and recycling program to a qualified third party that has history and success of operating product takeback collection programs, an ability to develop transportation systems to move waste safely and effectively, and, a history of working with recycling experts, local and/or state governments, and retailers.

   Next, AB 707 requires the thermostat manufacturers to provide $800,000 annually to DTSC to cover all administrative and oversight costs. Under the current program, DTSC does not have a dedicated funding source to fund program oversight or enforcement. Given DTSC's structural budget

deficiencies, the Mercury Thermostat Collection Program has been underfunded and therefore under-staffed. Additionally, the bill requires manufacturers to pay a qualified third party no less than $1,000,000 to develop and implement an education and outreach program. As noted above, the current education and outreach program has been woefully inadequate and entities that would be ideal collection partners (e.g., Home Depot) are unaware of the program. The collective stakeholders negotiated the above amount to ensure that lack of funding is not an issue inhibiting a robust marketing campaign. According to TRC, this represents almost a doubling of the annual financial commitment by manufacturers.

Further, AB 707 requires incentives for each thermostat collected. As mentioned earlier, incentives under other state thermostat collection programs buoyed collection significantly. To propel greater success in California, AB 707 follows the lead of Maine and Rhode Island and requires a consumer incentive of no less than $30 per out-of-service mercury-added thermostat returned to an established collection location.

Importantly, the bill also requires the qualified third party to conduct an annual survey of program partners to evaluate the effectiveness of the program's education and outreach campaign and to obtain collection data from each entity engaged in the collection of thermostats. The survey results will be transmitted to DTSC, posted online, and available for public feedback. Based on the survey results and the public comments, the qualified third party will have flexibility to adjust their education and outreach to designated entities and determine where greater assistance is needed to augment collection efforts to the greatest extent possible.

Finally, given that there are a finite number of mercury thermostats, there will be a natural attrition in collection over time. Provided that, the program does not need to last indefinitely. The inclusion of the January 1, 2030 sunset and a reporting provision will enable the Legislature to review the program ahead of the sunset date and determine whether to extend the program or not.

Related/Prior Legislation

AB 2347 (Ruskin, Chapter 572, Statutes of 2008) established California's Mercury Thermostat Collection Act of 2008 to require thermostat manufacturers to establish a collection and recycling program for out-of-service mercury-added thermostats.

AB 1193 (Ruskin, 2007) would have created a thermometer collection program. That bill was held in the Assembly Appropriations Committee.

SB 633 (Sher, Chapter 656, Statutes of 2001) established the California Mercury Reduction Act of 2001 to prohibit the sale of vehicles manufactured on or after January 1, 2005, that contain mercury light switches.

SOURCE: Thermostat Recycling Corporation

SUPPORT:

Thermostat Recycling Center

OPPOSITION:

None received

ARGUMENTS IN SUPPORT: The Thermostat Recycling Corporation (TRC) writes, "Under Assemblyman Quirk's leadership, stakeholders have been meeting for the past year to develop a consensus framework recasting the program. At the suggestion of stakeholder's, the measure before you contemplate manufacturers paying an experienced third-party non-profit group, with an exceptional track record of administering collection programs, to implement the mercury thermostat collection efforts on TRC's behalf. Among other things, the recast program also assumes at minimum almost a doubling of the annual financial commitment by manufacturers, outreach in multiple languages and to diverse communities and ensures that previously levied penalties will be put directly into mercury thermostat collection. A sunset date is also included to reflect intensified efforts over the next several years when it is anticipated most of the last remaining mercury-containing thermostats will be removed through remodels, upgrades, and demolition."

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