

1 TO THE HOUSE OF REPRESENTATIVES:

2 The Committee on Natural Resources, Fish, and Wildlife to which was  
3 referred House Bill No. 500 entitled “An act relating to prohibiting the sale of  
4 mercury lamps in the State” respectfully reports that it has considered the same  
5 and recommends that the bill be amended by striking out all after the enacting  
6 clause and inserting in lieu thereof the following:

7 Sec. 1. 10 V.S.A. § 7101 is amended to read:

8 § 7101. LEGISLATIVE FINDINGS

9 The General Assembly finds and declares that:

10 (1) Mercury is a persistent and toxic pollutant that bioaccumulates in the  
11 environment and poses a serious threat to humans, particularly young children  
12 and the developing fetus, and wildlife.

13 \* \* \*

14 (7) Human exposure to mercury can result in nervous system, kidney,  
15 and liver damage and impaired childhood development.

16 (8) There has been a threefold increase in mercury loading to the  
17 environment over the past 150 years. Much of the mercury deposited from the  
18 atmosphere is from human and natural sources, but anthropogenic emissions  
19 exceed those that occur naturally.

20 \* \* \*

1 (13) Many of the states in the region, including Connecticut, Maine,  
2 New York, and Rhode Island, have adopted comprehensive mercury-added  
3 product legislation to identify and eliminate unnecessary uses of mercury.

4 (14) Significant use of mercury-added products occurs in health care  
5 facilities, schools, and dental practices, in all of which mercury use or release  
6 reduction is technically and economically feasible.

7 \* \* \*

8 (17) Vermont’s mercury product legislation passed in 1998 does not  
9 comprehensively restrict the sale and use of mercury-added products.

10 (18) Studies conducted for the ~~State~~ state of Maine show that mercury-  
11 free alternatives exist for a majority of the thousands of products containing  
12 mercury components. These products include thermometers, thermostats, flow  
13 meters, barometers, manometers, medical devices, and electrical switches and  
14 relays.

15 (19) Studies conducted for the ~~State~~ state of Maine show that  
16 manufacturers are beginning to market mercury-free versions of all types of  
17 mercury-added button cell and other miniature batteries.

18 (20) Novelty products using mercury have been banned from sale in  
19 several states.

20 (21) All fluorescent lamps contain mercury and can create an immediate  
21 public health and environmental hazard when they accidentally break during

1 installation, use, transportation, storage, recycling, or disposal. Light-emitting  
2 diode (LED) replacements for fluorescent lamps do not contain any mercury.

3 (22) Fluorescent lamps are no longer the most energy-efficient lighting  
4 option in the marketplace. Lamps that contain LEDs have advanced  
5 significantly and today use approximately half the electricity as fluorescent  
6 lamps to produce the same amount of light. LEDs also last two to three times  
7 longer than fluorescent lamps.

8 (23) Fluorescent lamps are no longer the least life-cycle cost (LLCC)  
9 option because they cost twice as much to operate compared to an LED. LED  
10 retrofit tubes are the LLCC, and they pay for the slightly higher first cost in a  
11 matter of one to eight months, depending on price and application. After  
12 paying back initial costs, the LED tubes continue to operate for years to come,  
13 saving consumers and businesses on their lighting bills.

14 (24) LED retrofit lamps are widely available in a comprehensive set of  
15 sizes, shapes, lengths, and light colors. There are over 10,000 models of four-  
16 foot LED retrofit tubes that can replace fluorescent T5, T8, and T12 in the  
17 Design Lights Consortium Qualified Product List database.

18 (25) Suppliers who sold fluorescent lamps in Vermont after July 1, 2012  
19 made a profit from the sales of those lamps in the State, and they should  
20 remain responsible for ensuring the safe collection at the end-of-life of those

1 lamps due to the toxic nature of the mercury contained in the products they  
2 sold.

3 (26) Citizens of Vermont, the Vermont environment, and the Agency  
4 will benefit from comprehensive mercury product legislation that further  
5 reduces mercury emissions and is consistent with model mercury product  
6 legislation developed jointly by the northeast states.

7 Sec. 2. 10 V.S.A. § 7102 is amended to read:

8 § 7102. DEFINITIONS

9 As used in this chapter:

10 (1) “Agency” means the Vermont Agency of Natural Resources.

11 (2) “Elemental mercury” means the chemical symbol Hg. Elemental Hg  
12 is a silvery-white liquid (at room temperature) with an atomic number of 80  
13 and an atomic mass of 200.57.

14 \* \* \*

15 (9) “Mercury-added product” means a product, a commodity, a  
16 chemical, a product with one or more components, or a product that cannot  
17 function without the use of that component, that contains mercury or a mercury  
18 compound intentionally added to the product, commodity, chemical, or  
19 component in order to provide a specific characteristic, appearance, or quality,  
20 or to perform a specific function, or for any other reason. These products

1 include formulated mercury-added products and fabricated mercury-added  
2 products.

3 \* \* \*

4 (20) “Four-foot linear fluorescent lamp” means a general purpose, low-  
5 pressure, mercury-containing, electric-discharge light source in which a  
6 fluorescing coating transforms some of the ultraviolet energy generated by the  
7 mercury discharge into visible light, and includes all of the following  
8 characteristics:

9 (A) two bases or endcaps of any type, including single-pin, two-pin,  
10 or recessed double contact;

11 (B) light emission between a correlated color temperature of 1700K  
12 and 24000K and a Duv of +0.024 and –0.024 in the International Commission  
13 on Illumination (CIE) Uniform Color Space (CAM02-UCS);

14 (C) all tube diameters, including T2, T5, T8, T10, and T12; and

15 (D) four feet in length.

16 Sec. 3. 10 V.S.A. § 7105 is amended to read:

17 § 7105. RESTRICTIONS ON THE SALE AND USE OF CERTAIN

18 MERCURY-ADDED PRODUCTS

19 \* \* \*

1           (g) Fluorescent lamps. Beginning on January 1, 2024, no four-foot linear  
2 fluorescent lamp may be offered for final sale, sold at final sale, or distributed  
3 in Vermont as a new manufactured product.

4           (h) Exclusion for existing equipment. The prohibitions in subsections (e)  
5 and (f) of this section do not apply if the switch, relay, or measuring device is  
6 used to replace a switch, relay, or measuring device ~~which~~ that is a component  
7 of a larger product in use prior to January 1, 2007, provided the owner of that  
8 equipment has made every reasonable effort to determine that no compatible  
9 nonmercury replacement component exists.

10           ~~(h)~~(i) Exemptions.

11   \* \* \*

12           (7) The prohibition in subsection (g) of this section shall not apply to the  
13 following four-foot linear fluorescent lamps:

14           (A) lamps used for image capture and projection, including  
15 photocopying, printing directly or in pre-processing, lithography, film and  
16 video projection, and holography;

17           (B) lamps that have high proportions of ultraviolet light emission,  
18 including only the following:

19           (i) lamps with high ultraviolet content that have ultraviolet power  
20 ≥2 milliwatts per kilolumen (mW/klm);

1                   (ii) lamps for germicidal use or destruction of DNA that emit a  
2 peak radiation of approximately 253.7 nanometers;

3                   (iii) lamps used for disinfection or fly trapping where the radiation  
4 power emitted is between 250–315 nanometers represents  $\geq 5$  % or is between  
5 315–400 nanometers represents  $\geq 20$  % of the total radiation power emitted is  
6 between 250–800 nanometers;

7                   (iv) lamps used for the generation of ozone where the primary  
8 purpose is to emit radiation at approximately 185.1 nanometers;

9                   (v) lamps used for coral zooxanthellae symbioses where the  
10 radiation power emitted between 400–480 nanometers represents  $\geq 40$  % of  
11 total radiation power emitted is between 250–800 nanometers; and

12                   (vi) Any lamp intended for use in a sunlamp product, as that term  
13 is defined in 21 C.F.R. § 1040.20.

14 Sec. 4. 10 V.S.A. § 7161 is added to read:

15 § 7161. CONTINUED IMPLEMENTATION OF APPROVED

16 COLLECTION PLAN

17                   (a) Notwithstanding application of the requirements of this chapter to  
18 manufacturers of mercury containing lamps who sell, offer for sale, or deliver  
19 for subsequent sale in the State, a manufacturer that sold, offered for sale, or  
20 delivered mercury containing lamps for subsequent sale in the State prior to  
21 January 1, 2024 shall be required to continue implementation of an approved

1 collection plan and to continue compliance with the requirements under this  
2 chapter.  
3 (b) Beginning on January 15, 2024, the Secretary of Natural Resources  
4 shall recommend to the House Committee on Natural Resources, Fish, and  
5 Wildlife and the Senate Committee on Natural Resources and Energy whether  
6 the General Assembly should continue to require implementation of a  
7 collection plan by manufacturers under subsection (a) of this section.

8 Sec. 5. EFFECTIVE DATE

9 This act shall take effect on July 1, 2022.

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(Committee vote: \_\_\_\_\_)

\_\_\_\_\_

Representative \_\_\_\_\_

FOR THE COMMITTEE