



# LEGISLATIVE SUMMARY



## **Bill C-238:**

### **An Act respecting the development of a national strategy for the safe disposal of lamps containing mercury**

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Notice: For clarity of exposition, the legislative proposals set out in the bill described in this Legislative Summary are stated as if they had already been adopted or were in force. It is important to note, however, that bills may be amended during their consideration by the House of Commons and Senate, and have no force or effect unless and until they are passed by both houses of Parliament, receive Royal Assent, and come into force.

Any substantive changes in this Legislative Summary that have been made since the preceding issue are indicated in **bold print**.

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(Legislative Summary)

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# LEGISLATIVE SUMMARY OF BILL C-238: AN ACT RESPECTING THE DEVELOPMENT OF A NATIONAL STRATEGY FOR THE SAFE DISPOSAL OF LAMPS CONTAINING MERCURY

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## 1 BACKGROUND

Bill C-238, An Act respecting the development of a national strategy for the safe disposal of lamps containing mercury<sup>1</sup> (short title: National Strategy for Safe Disposal of Lamps Containing Mercury Act) was introduced in the House of Commons on 25 February 2016 by Member of Parliament Darren Fisher. The bill would require the Minister of the Environment, in cooperation with other parties, to develop and implement a national strategy for the safe disposal of lamps containing mercury (i.e., compact and tube fluorescent light bulbs).

### 1.1 ABOUT MERCURY

Mercury is a naturally occurring heavy metal that is very useful in a number of applications. Its usefulness stems from some of its unique properties:

- It is the only metal that is a liquid at room temperature.<sup>2</sup>
- It conducts electricity well.
- It reacts precisely to changes in pressure and temperature.<sup>3</sup>

These properties have led to the use of mercury in a number of products, such as fluorescent light bulbs, thermometers, thermostats, batteries, switches, relays and measuring devices.<sup>4</sup>

However, mercury is toxic to humans and certain other organisms, particularly when bonded to carbon in the form of methyl mercury, which can bioaccumulate through the food chain.<sup>5</sup> The most well-known case of mercury contamination is responsible for the name given to mercury poisoning – Minamata disease. In 1956, methyl mercury from a chemical plant in Minamata, Japan, was discovered to be responsible for acute, chronic and congenital (affecting the fetus) health problems that have since affected over 2,000 people.<sup>6</sup> In Canada, mercury accumulation in fish is responsible for many fish consumption advisories<sup>7</sup> and has had serious direct and indirect consequences on Indigenous peoples who rely on traditional food sources.<sup>8</sup> In fetuses, mercury, even at low levels, can impair neurological development.<sup>9</sup>

### 1.2 USE OF MERCURY IN FLUORESCENT LAMPS

The use of mercury in consumer products, such as fluorescent light bulbs, can pose a risk both to human health and to the environment. The 2013 Global Mercury Assessment estimated that consumer product waste was responsible for about 5% of mercury emissions.<sup>10</sup> The assessment noted that, while many consumer products made with mercury were being phased out by the use of less harmful substitutes, compact fluorescent light bulbs (CFLs) were an exception, with their use rising rapidly. There is no substitute for mercury in fluorescent lighting.

The increasing use of fluorescent light bulbs stems from several performance advantages. They are more efficient than incandescent light bulbs and less expensive than alternative high efficiency light bulbs, such as light-emitting diodes (LEDs). Their efficiency also means that they have environmental advantages, particularly in regions where electricity is derived from fossil fuels. Decreased electricity use through increased efficiency reduces associated greenhouse gas emissions. In addition, in regions where electricity is derived from burning coal, the use of fluorescent light bulbs may reduce overall emissions of mercury despite the mercury content of the bulbs, since burning coal releases a significant amount of mercury.<sup>11</sup>

Because of the environmental performance of fluorescent light bulbs, governments have encouraged their use. New minimum energy performance standards for light bulbs in Canada came into effect on 1 January 2014, effectively phasing out standard incandescent light bulbs in favour of more energy efficient options, including incandescent halogen bulbs, LEDs and fluorescent lighting.<sup>12</sup>

### 1.3 FEDERAL GOVERNMENT ACTION TO PREVENT MERCURY POLLUTION FROM FLUORESCENT LAMPS

In order to reduce mercury emissions associated with the manufacture and disposal of fluorescent light bulbs, in 2001 the provincial and federal governments under the auspices of the Canadian Council of Ministers of the Environment agreed to the Canada-Wide Standard for Mercury-Containing Lamps. This standard prescribed a “70% reduction by 2005 and an 80% reduction by 2010 in the average content of mercury in all mercury-containing lamps sold in Canada, from a 1990 baseline” of 43 mg per lamp.<sup>13</sup>

In addition, in October 2013 Canada signed – though it has not ratified – the Minamata Convention on Mercury. In part, the Convention would commit parties to prohibit by 2020 the manufacture, import or export of CFLs for general lighting purposes that are 30 watts or less with a mercury content exceeding 5 mg per lamp burner.<sup>14</sup> The average content of CFLs in Canada is currently 3.5 mg,<sup>15</sup> though the range is between 1 mg and 25 mg.<sup>16</sup>

Municipalities are responsible for collecting and disposing of or recycling products that contain mercury. As a result, programs for the safe disposal of fluorescent light bulbs vary greatly from one region to another. Some municipalities allow mercury-containing light bulbs to be put in the garbage for normal collection. The federal government suggests that people “[c]ontact [their] municipality to find out about local disposal options. Many retailers such as RONA, IKEA and London Drugs also accept used CFLs.”<sup>17</sup>

**In February 2016, the federal government published for public comment a *Proposed Code of Practice for the Environmentally Sound Management of End-of-life Lamps Containing Mercury*.<sup>18</sup> The objective of the code of practice “is to prevent the release of mercury to the environment by identifying best practices for collection, storage, transportation and processing of mercury-containing lamps at their end of life.”<sup>19</sup> Once the code of practice is finalized at**

**the end of 2016, it may guide jurisdictions and industry in planning waste management programs and any related regulations.**

## 2 DESCRIPTION AND ANALYSIS

Bill C-238 requires the Minister of the Environment to develop and implement a national strategy for the safe disposal of mercury-containing lamps (light bulbs) in cooperation with provinces, territories, environmental groups and industry (clause 2).

The national strategy is to include:

- national standards for the disposal of such lamps;
- guidelines for disposal facilities; and
- a plan for promoting public awareness of the importance of safe disposal.

The minister must prepare a report setting out the national strategy and ensure that the report is tabled in each House of Parliament. The report is to be tabled during the first 15 sitting days after the later of 31 December 2018 and two years after the bill receives Royal Assent. Within 10 days of the tabling of the report in Parliament, the minister must post the report on the departmental website (clause 3).

In addition, the bill requires that every five years the minister table in Parliament a report on the effectiveness of the national strategy (clause 4).

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## NOTES

1. [Bill C-238, An Act respecting the development of a national strategy for the safe disposal of lamps containing mercury](#), 1<sup>st</sup> Session, 42<sup>nd</sup> Parliament (first reading version, 25 February 2016).
2. Environment and Climate Change Canada, "[Chemical Properties](#)," *About Mercury*.
3. Environment Canada, [Mercury and the Environment](#), 2005.
4. Environment and Climate Change Canada, [Mercury and the Environment](#).
5. Environment and Climate Change Canada, "[Chemical Properties](#)," *About Mercury*.
6. M. Harada, "[Minamata disease: methylmercury poisoning in Japan caused by environmental pollution](#)," *Critical Reviews in Toxicology*, Vol. 25, No. 1, 1995.
7. See for instance, Ontario Government, [Guide to Eating Ontario Fish, 2015–2016](#).
8. See Assembly of First Nations, [Traditional Foods: Are they Safe for First Nations Consumption?](#), 2007.
9. World Health Organization, "[Mercury and health](#)," Fact sheet, *Media centre*, January 2016.
10. United Nations Environment Programme, [Global Mercury Assessment 2013: Sources, Emissions, Releases and Environmental Transport](#), 2013.

11. Scott Norris, "[Fluorescent Lights' Mercury Poses Dim Threat](#)," *National Geographic News*, 18 May 2007; and European Commission, Scientific Committee on Health and Environmental Risks, [Opinion on Mercury in Certain Energy-saving Light Bulbs](#), adopted on 18 May 2010.
12. Natural Resources Canada, [Canada's standard for efficient light bulbs](#) and [Frequently asked questions](#).
13. Canadian Council of Ministers of the Environment, [Canada-Wide Standard for Mercury-Containing Lamps](#), April 2001, p. 4; and [Canada-Wide Standards for Mercury: A Report on Compliance and Evaluation for Mercury from Dental Amalgam Waste and A Report on Progress for Mercury Emissions and Mercury-Containing Lamps](#), October 2007, p. 7.
14. United Nations Environment Programme, "Annex A," [Minimata Convention on Mercury: Text and Annexes](#), 2013, p. 46.
15. Natural Resources Canada, [Mercury in Compact Fluorescent Light Bulbs \(CFLs\)](#).
16. Environment and Climate Change Canada, "[Compact Fluorescent Lamps](#)," *Fluorescent Lamps*.
17. Natural Resources Canada, [Mercury in Compact Fluorescent Light Bulbs \(CFLs\)](#).
18. **Environment and Climate Change Canada, [Proposed Code of Practice for the Environmentally Sound Management of End-of-life Lamps Containing Mercury](#), February 2016.**
19. **Ibid.**