The Florida Senate

BILL ANALYSIS AND FISCAL IMPACT STATEMENT

(This document is based on the provisions contained in the legislation as of the latest date listed below.)

Prepared By: The Professional Staff of the Appropriations Committee on Agriculture, Environment, and General Government

BILL:	CS/SB 1030
INTRODUCER:	Environment and Natural Resources Committee and Senator Trumbull
SUBJECT:	Recycling of Covered Electronic Devices
DATE:	April 17, 2023
REVISED:	

	ANALYST	STAFF DIRECTOR	REFERENCE	ACTION
1.	Barriero	Rogers	EN	**Fav/CS**
2.	Reagan	Betta	AEG	**Pre-meeting**
3.			AP	

Please see Section IX. for Additional Information:

COMMITTEE SUBSTITUTE - Substantial Changes

I. Summary:

CS/SB 1030 creates the Statewide Covered Electronic Device Recovery Program within the Department of Environmental Protection (DEP). The purpose of the program is to create a statewide plan for the recycling of covered electronic devices, including:

- Computers, computer monitors, and portable computers;
- Printers, scanners, and fax machines;
- Stereos and radios;
- DVD players;
- Telephones, including mobile phones;
- Televisions;
- Small household appliances; and
- Computer peripherals.

The bill requires the DEP to consider the following when creating the statewide plan:

- Existing collection and consolidation infrastructure for collecting covered electronic devices;
- Convenience standards for each county or solid waste authority;
- County population statistics and data of residents; and
- Administrative costs and other authorized expenses necessary to prevent the disposal of covered electronic devices in landfills.

The bill provides that, by January 1, 2025, each county must submit to the DEP a plan for ensuring the county will appropriately dispose of covered electronic devices at a permitted reclamation facility. Effective January 1, 2026, any person who owns or operates an industrial, institutional, or commercial facility must dispose of that facility's covered electronic devices in a permitted reclamation facility. Effective January 1, 2028, it will be unlawful for any person to dispose of covered electronic devices in this state except at a permitted reclamation facility. Any person in violation of these requirements will be liable for damages and subject to civil penalties pursuant to s. 403.141, F.S., which imposes a penalty of not more than $15,000 per offense.

In addition, the bill directs the DEP to adopt rules to implement the Statewide Covered Electronic Device Recovery Program. The rules must include:

- Criteria and procedures for obtaining a reclamation facility permit;
- Standards for reclamation facilities and associated collection centers and standards for the storage of covered electronic devices; and
- Requirements for the collection of data on the amounts of precious metals recovered through the program.

The DEP will incur indeterminate costs to develop the Statewide Covered Electronic Device Recovery Program and rules to implement the program.

The effective date of the bill is July 1, 2023.

II. Present Situation:

Recycling Electronic Devices

Electronic products are made from valuable resources and materials, including metals, plastics, and glass, all of which require energy to mine and manufacture.[1] Recycling consumer electronics reduces the amount of raw materials mined and energy used to produce new products, as well as the packaging used to transport them.[2]

According to a 2006 estimate by the United States Geological Survey (USGS), recycling one million laptops saves the energy equivalent to the electricity used by more than 3,500 homes in a year.[3] In addition, for every million cell phones recycled, 35,000 pounds of copper, 772 pounds of silver, 75 pounds of gold, and 33 pounds of palladium can be recovered.[4] These recovered materials can be used in new products.[5]

[1] Environmental Protection Agency (EPA), *Electronics Donation and Recycling*, https://www.epa.gov/recycle/electronics-donation-and-recycling (last visited Mar. 7, 2023).
[2] EPA, *Secret Life of a Smart Phone*, https://www.epa.gov/sites/default/files/2015-06/smartphone_infographic_700.jpg (last visited Mar. 7, 2023).
[3] *Id.*
[4] *Id.*; USGS, *Recycled Cell Phones – A Treasure Trove of Valuable Metals*, *available at* https://pubs.usgs.gov/fs/2006/3097/fs2006-3097.pdf.
[5] EPA, *Secret Life of a Smart Phone*.

Some electronic devices contain cathode ray tubes (CRTs). CRT displays were widely used in televisions and computer monitors before being replaced by flat panel displays.[6] While some CRT displays are still in use today, very few new CRTs are being produced as electronics manufacturers follow demand for flat panel displays. As consumers and businesses replace their CRT monitors and televisions, electronics recyclers receive the discarded CRT products. Unfortunately, the market for recycled CRT glass has become limited and costly, making CRT glass recycling a challenge to electronic scrap recyclers. As a result, some electronics recyclers and many second-hand stores such as Goodwill and the Salvation Army no longer accept CRT products.[7]

Certified Electronics Recyclers

The Environmental Protection Agency (EPA) recommends using certified electronics recyclers to manage unwanted used electronics.[8] Electronics recyclers can become certified by demonstrating to an accredited, independent third-party auditor that they meet specific standards to safely recycle and manage electronics. There are two accredited certification standards: the Responsible Recycling Standard for Electronics Recyclers and the e-Stewards Standard for Responsible Recycling and Reuse of Electronic Equipment. Both programs advance best management practices and provide a way to assess the environmental, worker health and safety, and security practices of entities managing used electronics. Once certified, continual oversight by the independent accredited certifying body holds the recycler to the particular standard.[9]

Rare-Earth Metals

Rare-earth metals are a set of 17 elements, including scandium, yttrium, and praseodymium. While rare-earth metals are abundant in the earth's crust, they appear in low concentrations in minerals and are difficult to separate from other elements, which is what makes them rare.[10] These metals are valued for their conductive and magnetic properties[11] and have a wide variety of applications, ranging from magnets, lasers, GPS satellites, computer components, lighting,

[6] DEP, *Electronics Waste*, https://floridadep.gov/waste/permitting-compliance-assistance/content/electronics-waste (last visited Mar. 7, 2023).
[7] *Id.*
[8] EPA, *Certified Electronics Recyclers*, https://www.epa.gov/smm-electronics/certified-electronics-recyclers (last visited Mar. 7, 2023).
[9] EPA, *Certified Electronics Recyclers*, https://www.epa.gov/smm-electronics/certified-electronics-recyclers (last visited Mar. 7, 2023).
[10] Harvard International Review, *Not So "Green" Technology: The Complicated Legacy of Rare Earth Mining* (2021), https://hir.harvard.edu/not-so-green-technology-the-complicated-legacy-of-rare-earth-mining/ (last visited Mar. 8, 2023).
[11] Felix K. Chang, Foreign Policy Research Institute, *China's Rare Earth Metals Consolidation and Market Power*, (2022), https://www.fpri.org/article/2022/03/chinas-rare-earth-metals-consolidation-and-market-power/.

X-ray and MRI scanning systems, and other electronics.[12] In addition to the electronics sector, the U.S. defense industry relies heavily on rare earth elements to produce weapon guidance systems, jet engines, sonar devices, and laser weapons.[13]

There are two primary methods for rare-earth mining, both of which release toxic chemicals into the environment.[14] Recycling rare-earth metals is one alternative to mining. Adding recycled rare-earth metals as a new source to the supply chain is expected to reduce environmental contamination and energy costs associated with their primary mining and separations.[15] Additionally, a new domestic source of these metals would be a positive contribution to U.S. technology at competitive prices.[16] Though the cost of re-separation and purification may be a limitation on recycling rare-earth metals,[17] some companies are already using this technology.[18] For example, Apple's iPhone 12 is made from 98 percent reused rare-earth metals.[19]

Demand for rare-earth metals is projected to spike in coming years as governments, organizations, and individuals increasingly invest in clean energy.[20] An electric car requires six times the mineral inputs of a conventional car, and a wind plant requires nine times more minerals than a gas-fired plant. With current estimates, demand for rare-earth metals could increase six-fold by 2040.[21]

China is the largest producer of rare-earth metals,[22] accounting for 85 percent of the global supply in 2016.[23] China's dominance in this market has raised concerns about the risk of supply chain disruption if rare-earth metal exports from China slow or cease.[24] In 2022, the U.S. imported an estimated $200 million of rare-earth compounds and metals, a 25 percent increase from 2021.[25] The vast majority—74 percent—of these imports came from China.[26]

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[12] Earth.org, *How Rare-Earth Mining Has Devastated China's Environment*, (2020), https://earth.org/rare-earth-mining-has-devastated-chinas-environment/#:~:text=In%202018%2C%20China%20produced%20120%20000%20metric%20tons,as%20Inner%20Mongolia%20and%20as%20west%20as%20Sichuan; U.S. Senate Republican Policy Committee, *Policy Papers: Protecting America's Supply of Rare Earth Elements*, (2020), https://www.rpc.senate.gov/policy-papers/protecting-americas-supply-of-rare-earth-elements (last visited Mar. 8, 2023).
[13] *Id.*
[14] Harvard International Review, *Not So "Green" Technology: The Complicated Legacy of Rare Earth Mining*.
[15] U.S. Dep't of Energy, *Rare Earth Recycling* (2017), https://www.energy.gov/science/bes/articles/rare-earth-recycling.
[16] *Id.*
[17] *Id.*
[18] Harvard International Review, *Not So "Green" Technology: The Complicated Legacy of Rare Earth Mining* (2021), https://hir.harvard.edu/not-so-green-technology-the-complicated-legacy-of-rare-earth-mining/ (last visited Mar. 8, 2023).
[19] *Id.*
[20] *Id.*
[21] *Id.*
[22] U.S. Senate Republican Policy Committee, *Policy Papers: Protecting America's Supply of Rare Earth Elements*.
[23] Harvard International Review, *Not So "Green" Technology: The Complicated Legacy of Rare Earth Mining*.
[24] U.S. Senate Republican Policy Committee, *Policy Papers: Protecting America's Supply of Rare Earth Elements*. For example, China abruptly stopped exports of rare earth elements to Japan during a diplomatic clash in 2010 over the fate of a Chinese fishing boat captain. *Id.*
[25] United States Geological Survey (USGS), *Mineral Commodity Summaries: Rare Earths*, 1 (2023), *available at* https://pubs.usgs.gov/periodicals/mcs2023/mcs2023-rare-earths.pdf.
[26] *Id.*

Electronic Waste Regulations and the CRT Rule

While Florida has no laws or regulations that apply specifically to discarded electronic products, ch. 403, F.S., regulates the management of devices and lamps containing mercury.[27] Section 403.7186(2), F.S., prohibits the incineration or disposal of mercury-containing devices in a landfill. Grants are available for local governments and other public and private entities to develop and operate mercury recycling programs.[28]

In addition, the DEP has provided guidelines for the disposal of electronics.[29] These guidelines are based on the CRT rule[30] issued by the EPA in 2006 and adopted by the DEP in 2008.[31] The CRT rule divides electronic products into two groups: products that contain a CRT, such as televisions and computer monitors, and products that do not contain a CRT, such as desktop and portable computers, flat panel televisions and computer monitors, and cellular phones.[32] Used CRTs discarded by households are considered "household hazardous waste" and are exempt from hazardous waste regulations.[33] The CRT Rule is intended to encourage recycling and reuse of CRTs and CRT glass. The rule streamlines management requirements for recycling of used CRTs and glass removed from CRTs by excluding these materials from hazardous waste regulation if certain conditions are met.[34]

III. Effect of Proposed Changes:

The bill contains whereas clauses stating the following:

- China presents the broadest, most active and persistent cyber espionage threat to the United States Government and private sector networks;
- The technology products and services most vulnerable to malicious foreign exploitation are sold by companies that the Chinese Government influences through whole or partial ownership, direct funding, or members placed in high-ranking company positions; and
- It is the intent of the Legislature to incentivize and provide the necessary infrastructure to recycle electronic and technology products in the state in order to reduce our economic reliance on such products made in China.

Section 1 establishes the Statewide Covered Electronic Device Recovery Program within the DEP. The purpose of the program is to create a statewide plan for the recycling of covered electronic devices. Covered electronic devices include:

- Computers;
- Computer monitors;

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[27] Section 403.7186, F.S.
[28] Section 403.7186(5)(a), F.S.
[29] DEP, *Regulatory Guidelines for the Management of Unwanted Electronic Products*, 1 (2008), *available at* https://depedms.dep.state.fl.us/Oculus/servlet/shell?command=getEntity&[guid=2.403165.1]&[profile=DWM%20Historical%20Repository].
[30] 40 CFR ss. 260, 261, and 271.
[31] DEP, *Regulatory Guidelines for the Management of Unwanted Electronic Products*, 1.
[32] *Id.*
[33] 40 CFR 261.4(b)(1). *See also* EPA, *Frequent Questions About the Regulation of Used Cathode Ray Tubes (CRTs) and CRT Glass*, no. 18, https://www.epa.gov/hw/frequent-questions-about-regulation-used-cathode-ray-tubes-crts-and-crt-glass#2 (last visited Mar. 7, 2023).
[34] *Id.*

- Portable computers;
- Printers;
- Fax machines;
- Scanners;
- Stereos and radios;
- DVD players;
- Telephones, including mobile phones;
- Televisions;
- Small household appliances, including, but not limited to, coffee pots, toasters, toaster ovens, blenders, and microwaves; and
- Computer peripherals, including, but not limited to, mice, keyboards, and speakers.

Covered electronic devices do not include a device that is:
- A part of a motor vehicle or any component part of a motor vehicle assembled by or for a vehicle manufacturer or franchised dealer, including, but not limited to, replacement parts for use in a motor vehicle;
- A part of a larger piece of equipment designed and intended for use in an industrial, commercial, or medical setting, including, but not limited to, diagnostic, monitoring, or control equipment; or
- Contained within a clothes washer or dryer, refrigerator or freezer, microwave oven, conventional oven, dishwasher, room air conditioner, dehumidifier, or air purifier.

The bill requires the DEP to consider the following when creating the statewide plan:
- Existing collection and consolidation infrastructure for collecting covered electronic devices;
- Convenience standards for each county or solid waste authority;
- County population statistics and data of residents; and
- Administrative costs and other authorized expenses necessary to prevent the disposal of covered electronic devices in landfills.

The bill provides that, by January 1, 2025, each county must submit to the DEP a plan for ensuring the county will appropriately dispose of covered electronic devices at a permitted reclamation facility.

The bill also provides that, effective January 1, 2026, any person who owns or operates an industrial, institutional, or commercial facility must dispose of that facility's covered electronic devices in a permitted reclamation facility. Effective January 1, 2028, it will be unlawful for any person to dispose of covered electronic devices in this state except at a permitted reclamation facility. Any person in violation of these requirements will be liable for damages and subject to civil penalties pursuant to s. 403.141, F.S., which imposes a penalty of not more than $15,000 per offense.

The bill directs the DEP to adopt rules by July 1, 2024, to implement the Statewide Covered Electronic Device Recovery Program. The rules must include:
- Criteria and procedures for obtaining a reclamation facility permit;
- Standards for reclamation facilities and associated collection centers and standards for the storage of covered electronic devices; and

- Requirements for the collection of data on the amounts of precious metals recovered through the program.

Section 2 provides an effective date of July 1, 2023.

IV. Constitutional Issues:

A. Municipality/County Mandates Restrictions:

The county/municipality mandates provision of Art. VII, s. 18(a) of the Florida Constitution may apply to this bill because local governments may be required to expend funds to develop plans to ensure the county will appropriately dispose of covered electronic devices at a permitted reclamation facility. However, the law would have an insignificant fiscal impact. Therefore, an exception from Art. VII, s. 18(a) of the Florida Constitution likely applies.

B. Public Records/Open Meetings Issues:

None.

C. Trust Funds Restrictions:

None.

D. State Tax or Fee Increases:

None.

E. Other Constitutional Issues:

None.

V. Fiscal Impact Statement:

A. Tax/Fee Issues:

None.

B. Private Sector Impact:

The bill specifies that a person who does not appropriately dispose of a covered electronic device is liable for damages and subject to a civil penalty for each offense in an amount of up to $15,000 per offense. The penalty may be waived if the person has previously taken appropriate corrective action to remedy the actual damages, if any, caused by the unlawful act or rule violation.

C. Government Sector Impact:

The DEP may incur costs to develop the Statewide Covered Electronic Device Recovery Program and rules to implement the program. In addition, counties may incur costs to develop plans to ensure the county will appropriately dispose of covered electronic devices at a permitted reclamation facility. Local governments may also be required to expend funds related to enforcing the civil penalties under with this bill.

VI. Technical Deficiencies:

None.

VII. Related Issues:

None.

VIII. Statutes Affected:

This bill creates the section 403.71853 of the Florida Statutes.

IX. Additional Information:

A. Committee Substitute – Statement of Substantial Changes:
(Summarizing differences between the Committee Substitute and the prior version of the bill.)

CS by Environment and Natural Resources on March 14, 2023:
Expanded the bill's definition of "covered electronic device" to include telephones, (including mobile phones) and the following additional devices:

- Printers;
- Fax machines;
- Scanners;
- Stereos;
- DVD Players;
- Radios;
- Small household appliances, including, but not limited to, coffee pots, toasters, toaster ovens, blenders, and microwaves; and
- Computer peripherals, including, but not limited to, mice, keyboards, and speakers.

It also removed the requirement that a device's screen size be greater than four inches to be considered a covered electronic device.

B. Amendments:

None.