

Section by Section Analysis of Responsible Electronics Recycling Act

HR 2284 /S 1270. [Analysis noted in blue.](#)

A BILL - To prohibit the export from the United States of certain electronic waste, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the ‘‘Responsible Electronics Recycling Act’’.

SECTION 2. ELECTRONIC WASTE EXPORT RESTRICTIONS.

(a) AMENDMENT.—Subtitle C of the Solid Waste Disposal Act (42 U.S.C. 6921 et seq.) is amended by adding at the end the following new section:

[Explanation: This bill establishes a new section of RCRA.](#)

‘‘SEC. 3024. ELECTRONIC WASTE EXPORT RESTRICTIONS.

[Explanation: The bill uses a new term, ‘‘restricted electronic waste’’ instead of the term ‘‘hazardous waste’’ which has a severely restricted legal meaning under RCRA, given that most electronic waste has been exempted from the definition of hazardous waste via EPA rulemaking. This legislation does not roll back those exemptions \(which would have implications for domestic handling\) but instead establishes new conditions regarding their export.](#)

[The bill describes a broad list of ‘‘covered electronic equipment’’ - section b\(2\)\(A\) below- which is considered ‘‘restricted electronic waste’’ when it contains certain listed toxic materials – in section b\(3\) with certain exceptions which include those under the categories De Minimis, Reuse, certain Cathode Ray Tube glass cullet, Warranty, and Recall as fully described in b\(3\)B below.](#)

‘‘(a) IN GENERAL.—Beginning on the date that is 24 months after the date of enactment of this section, no person shall export any restricted electronic waste to a country described in subsection (e).

[Explanation: ‘‘A country described in subsection \(e\)’’ means a developing country. Two years after this legislation is enacted, it will be illegal to export restricted electronic waste to a developing country.](#)

‘‘(b) DEFINITIONS; RULE OF CONSTRUCTION.—For purposes of this section:

‘‘(1) CONSIGNEE.—The term ‘consignee’ means the ultimate repair, refurbishment, treatment, storage, or disposal facility in a receiving country to which restricted electronic waste will be sent.

‘‘(2) COVERED ELECTRONIC EQUIPMENT.—

‘‘(A) IN GENERAL.—The term ‘covered electronic equipment’ means the following used items, whole or in fragments, including parts, components, or assemblies thereof:

- “(i) Computers.
- “(ii) Central processing units.
- “(iii) Mobile computers (including notebooks, netbooks, tablets, and e-book 25 readers).
- “(iv) Computer accessories (including input devices, webcams, speakers, data storage devices, servers, and monitors).
- “(v) Televisions (including portable televisions and portable DVD players).
- “(vi) Video display devices (including digital picture frames and portable video devices).
- “(vii) Digital imaging devices (including printers, copiers, facsimile machines, image scanners, and multifunction machines).
- “(viii) Television peripheral devices (including video cassette recorders, DVD players, video game systems, game controllers, signal converter boxes, and cable and satellite receivers).
- “(ix) Digital cameras and projectors.
- “(x) Digital audio players.
- “(xi) Telephones and electronic communication equipment (including cellular phones and wireless internet communication devices).
- “(xii) Networking devices (including routers, network cards, modems, and hubs).
- “(xiii) Audio equipment.
- “(xiv) Portable video game systems.
- “(xv) Personal digital assistants.
- “(xvi) Portable global positioning system navigation devices.
- “(xvii) Other used electronic products the Administrator determines to be similar under the procedures promulgated in accordance with subsection (c).

[Explanation: Subsection \(xvii\) provides for the possibility of adding to the list of covered products.](#)

“(B) EXCEPTION.—The term ‘covered electronic equipment’ shall not include parts of a motor vehicle.

“(3) **RESTRICTED ELECTRONIC WASTE.**—

“(A) IN GENERAL.—The term ‘restricted electronic waste’ means—

- “(i) items of covered electronic equipment, that include, contain, are derived from, or consist of—

[Explanation: The terms “are derived from, or consist of” are meant to include products or parts as well as shredded or processed material.](#)

[The list below includes the primary toxic materials publicly known to be found in electronics, as well as certain components known to contain toxic materials. Even though CRTs and circuit boards contain these named chemicals, CRTs, CRT glass, and circuit boards are identified specifically in this legislation, to make it clear that this language supersedes the current rules that exist for CRTs, CRT glass and circuit boards. Currently, circuit boards exported for recycling are specifically exempt them from definitions of hazardous waste, and therefore from the](#)

normal RCRA export controls. CRTs exported supposedly for reuse have also been exempted from the definition of hazardous waste and exporters need only file a one-time report to the EPA. No approval is required.

- “(I) cathode ray tubes or cathode ray tube glass in any form, or cathode ray tube phosphor residues or dusts in any form;
- “(II) a lamp or other device containing mercury phosphor;
- “(III) batteries containing—
 - “(aa) lead, cadmium, or mercury; or
 - “(bb) organic solvents exhibiting the characteristic of ignitability, as defined in section 261.21 of title 40, Code of Federal Regulations; [This includes lithium ion batteries]

Explanation: Batteries are defined this way to be consistent with the way international laws determine which batteries are considered hazardous waste. Regular alkaline batteries are not covered by this legislation.

- “(IV) switches or any other devices containing mercury;
- “(V) hexavalent chromium;

- “(VI) other than batteries described in subclause (III), items containing antimony, barium, cadmium, lead, thallium, beryllium, arsenic, or selenium, including—
 - “(aa) circuit boards;
 - “(bb) printer drums;
 - “(cc) liquid crystal displays;
 - “(dd) flatscreen glass; and
 - “(ee) light emitting diodes; or

- “(ii) any other covered electronic equipment, or materials derived therefrom, containing any other toxic material, in elemental or compound form, identified by the Administrator under subsection (c). Explanation: Subsection (c) gives the EPA a way to add materials to this list.

As explained above, “Covered electronic equipment” is considered “restricted electronic waste” only when it contains certain listed toxic materials in elemental form or in compounds. This section b (3) (A) (i) (I) through (VI) (ii) (see above and below) lists the toxics.

The bill basically divides the relevant toxic materials into two groups. Group 1 at (b) (A) (i) through (V) includes those materials whose presence (at any threshold) serves to categorize the product or part as a “restricted electronic waste.” There is no “de minimis” level set for these that exempt them from the definition. Group 2 at (b) (A) (i) (VI) and (b) (A) (ii) lists the chemicals for which the EPA must set a de minimis level. If the product or part contains the chemical, but it’s below the de minimis level, then it will be exempted as a restricted electronic waste.

Group 1 – (No de minimis level) includes:
- cathode ray tubes (CRTs), CRT glass, and the very toxic dusts that are “cleaned” from the glass during CRT processing

- anything containing mercury, including lamps and switches
- batteries containing lead, cadmium, mercury, or ignitable organic solvents. This excludes normal alkaline batteries.
- hexavalent chromium

Group 2 – Covered electronic equipment (except for batteries) with less than the de minimis level of all these chemicals are exempted from the definition of restricted electronic waste: antimony, barium, cadmium, lead, thallium, beryllium, arsenic, or selenium. The bill lists certain parts found in electronics that are very likely to contain one or more of these chemicals: circuit boards; printer drums, liquid crystal displays; flatscreen glass; and light emitting diodes (LEDs).

“(B) EXCEPTIONS.—The term ‘restricted electronic waste’ shall not apply to items described in this subparagraph.

The bill exempts five types of covered equipment from the definition of restricted electronic waste, and therefore from export restrictions. More details provided in each section below. Exports of these exempted items requires a notice and consent procedure, and written permission from the importing country (as explained later in Section (f): Notice to Administrator).

1. Items which contain less than the de minimis amount of antimony, barium, cadmium, lead, thallium, beryllium, arsenic, and selenium (and don’t contain the other toxic materials described in Group 1 above)
2. Tested and working equipment, going into legitimate reuse markets
3. Processed and cleaned CRT glass that’s going into a CRT glass manufacturing plant, in countries where that’s a legal import
4. Products being sent for warranty repairs
5. Products being sent because of recalls

“(i) DE MINIMIS.—Covered electronic equipment described in subparagraphs (A)(i)(VI) and (A)(ii), including separated component streams (such as plastics or metals), which does not exceed de minimis levels set by the Administrator under subsection (d).

See explanation of de mimimis issues above (Section 3a).

“(ii) REUSE.—Covered electronic equipment that is—
 “(l) tested prior to export pursuant to subsection (i)(1), and found to be—
 “(aa) functional for the purpose for which the equipment was designed, or, in the case of multifunction devices, fully functional for at least one of the primary purposes for which the equipment was designed; and

“(bb) appropriately packaged for shipment to prevent the equipment from losing functionality due to damage during transit; and
“(ll) appropriately labeled or marked pursuant to subsection (i)(3)(A).

Explanation

Reuse: The bill allows the export of tested and working parts or equipment sent under the terms set forth for legitimate reuse. It’s important to recognize that most of the e-waste exports currently occurring are under the guise of reuse. Many exporters will label containers full of e-waste as intended for reuse, even though little or none of it has been tested, and some or all has no reuse potential at its destination. Even if repairs are made in the destination country, the repairs typically generate hazardous waste (in the form of parts removed). Therefore, this bill does not prevent reuse; it does require “clean” exports, by requiring the equipment to be tested and working, packaged to keep it from breaking in shipping, and labeled appropriately.

Functionality: While the bill looks to rulemaking to define functionality testing procedures, (described in section i), in order to be eligible for the reuse exception, the products or parts must be “functional for the purpose for which the equipment was designed.” This means more than simply whether it will power on; it actually has to work. For instance, if a laptop can perform its basic functions, but one of its USB ports or an internal speaker is not working, it would not flunk the functionality test. However, if a cell phone cannot function for the purpose of making phone calls (its primary purpose) but still works as a camera, this does not meet the criteria of “functional for the purpose for which the equipment or parts were designed.” There is a category of “multi-function” devices, that typically combines printing, faxing, copying, and scanning. In this case, if one of these primary functions works, then the export would be allowed. For example, the device will print, but it won’t fax, and the customer wants a printer, this export would be allowed.

“(iii) CERTAIN CATHODE RAY TUBE GLASS.—Furnace-ready cathode ray tube glass cullet, cleaned of all phosphors, to be used as a direct feedstock in a lead-glass manufacturing furnace without further processing or preparation required other than quality control, which the competent authority in the importing country states in writing is not waste.

Explanation: The bill does not seek to prevent CRT glass-to-glass recycling where it’s legal. Under the Basel Convention, CRT glass is considered a hazardous waste. (It’s specifically listed on Annex VIII of the Basel Convention as a hazardous waste.) That means that most countries can’t legally import it from the U.S. However, some countries that have CRT glass manufacturing facilities may not consider this kind of processed glass (ready to go into remanufacturing without further cleaning) to be a waste, but instead consider it a manufacturing feedstock. (There is legal latitude for this determination at the country level, because the Basel Convention also defines waste as material destined to a recycling or

disposal destination, and if it's going into remanufacturing, that's not considered recycling or disposal.) To allow this exception, the U.S. will need guidance from the competent authority in the importing country that the country has determined that glass processed in this way is not considered a waste, but is considered a feedstock. This is most relevant for India, Malaysia, and China, which currently are known to have glass-to-glass recycling facilities.

“(iv) WARRANTIES.—Customer returns, to point of sale or to contractual warranty collectors, of recently purchased covered electronic equipment that is either—

“(I) under original equipment manufacturer warranty to customers; or

“(II) under warranty from the original design manufacturer or original component manufacturer to the original equipment manufacturer, or otherwise returned by the original purchaser of the electronic equipment, due to defect or customer dissatisfaction, and the manufacturer accepts such returns for the purposes of repair or replacement in order to return to the customer a functional working product or part of the same type and model, except that products and parts covered in this subparagraph shall not include—

“(aa) covered electronic equipment accepted for return from individuals or businesses under general takeback, recycling, trade-in (for purposes of recycling, disposal, sales promotions, or obtaining credit for product purchases or leases) or buy-back programs, events, or policies designed to collect used or waste electronic equipment;

“(bb) covered electronic equipment returned at the end of leases to customers; or

“(cc) covered electronic equipment collected by asset recovery programs.

Explanation:

An **original equipment manufacturer (OEM)** is the large brand owner, like Dell or Apple. The **original design manufacturer** means the company that physically manufactures the products, which is typically a contracted firm, such as Flextronics, or Foxconn. The **original component manufacturer** makes components, like hard drives, disk drives, display panels, etc.. Manufacturers (OEMs) want to be able to export equipment under warranty back to the actual companies/facilities where they were manufactured for those companies to fix them. Mostly these are products still under their warranty to consumers. For some, these are products just slightly beyond the warranty time, but the OEMs treat them (for customer satisfaction purposes) as though they are still under warranty, providing a replacement to the customer and sending the original for repairs by the warranty firm. It's important that this language make it clear that the exemption does not apply to a broader range of products being returned for recycling or end-of-life management. For that reason, these exports are limited to those sent from the OEM to the ODM or component

manufacturer or warranty repair firm only and should not apply to any company which wants to export non-working products for repairs.

“(v) RECALLS.—Recalls of covered electronic equipment by an original equipment manufacturer or original design manufacturer where—

“(I) the covered electronic equipment is subject to recall notice issued by the Consumer Product Safety Commission or other pertinent Federal authority;

“(II) the original design manufacturer requires the defective covered electronic equipment to be physically returned to that manufacturer as a term of the warranty; and

“(III) any export of recalled covered electronic equipment is to a country from whose competent authority the Administrator receives written consent pursuant to subsection (h)(2).

Explanation: If a part is formally recalled, and the warranty requires that it must be physically sent back to the manufacturer, this part is exempted as a restricted electronic waste, and may be exported as long as the receiving country gives permission for the import.

“(4) **RULE OF CONSTRUCTION REGARDING CHEMICAL ELEMENTS.**—Any reference to a chemical element shall be construed to be a reference to that element in compound or elemental form.

“(c) **ADDITIONAL COVERED ELECTRONIC EQUIPMENT AND RESTRICTED MATERIALS.**—Not later than 18 months after the date of enactment of this section, the Administrator shall, after notice and opportunity for public comment, and after consultation with appropriate Federal and State agencies, develop and promulgate procedures for identifying—

“(1) similar electronic equipment to add to the list of covered electronic equipment under subsection (b)(2); and

“(2) additional restricted toxic materials to add to the list in subsection (b)(3)(A)(ii), the presence of which in covered electronic equipment poses a potential hazard to human health or the environment. Such procedures shall include a method for any interested party to propose a new product or material for review by the Administrator.

Because new technology brings new materials into commerce, and because both old and new materials can be found to contain hazards, this section provides for rulemaking to establish a process for adding new restrictions, as well as new equipment, to the definitions.

“(d) **DE MINIMIS LEVELS.**—Not later than 18 months after the date of enactment of this section, the Administrator shall, after notice and opportunity for public comment, and

after consultation with appropriate Federal and State agencies, develop and promulgate procedures for identifying de minimis levels for restricted electronic waste described in subparagraphs (A)(i)(VI) and (A)(ii) of subsection (b)(3), below which such waste is determined by the Administrator not to pose a potential hazard to human health or the environment.

Explanation: In defining restricted electronic equipment, the bill lists several toxic materials, the presence of which would cause covered equipment to be considered restricted waste. But it's possible that a chemical analysis of some products or parts might find a very small amount of some of these substances, perhaps even unintentionally added to the product. Therefore, the bill calls for the EPA to set de minimis levels for the substances.

“(e) COUNTRIES TO WHICH PROHIBITION APPLIES.—The countries referred to in subsection (a) are all countries which are not—

“(1) members of the Organization for Economic Co-operation and Development or the European Union; or

“(2) Liechtenstein.

Explanation: This bill restricts certain exports to developing nations only; it makes no restrictions on exports to developed nations. The developed nations are those that belong to the OECD (the Organisation for Economic Cooperation and Development) plus the six nations who are members of the EU (but not in the OECD), plus Liechtenstein (which is a member of neither). Therefore, developing nations are the rest of the countries. This is the same definition as is used in the Basel Convention – the global treaty that governs e-waste -- for defining the developed nations.

OECD countries are: Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Spain, Sweden, Switzerland, Turkey, United Kingdom, and United States.

The EU countries which are not in the OECD: Cypress, Estonia, Latvia, Lithuania, Malta, Slovenia, plus Liechtenstein (which is not in the EU or in the OECD).

“(f) NOTICE TO ADMINISTRATOR.—No person shall export covered electronic equipment described in subsection (b)(3)(B) [(b)(3)(B) is the section listing the five exceptions to the definition of restricted electronic waste] to a country described in subsection (e) [a developing nation] unless, not later than 60 days before the initial export shipment, such person transmits to the Administrator written notice of an intended export. Such a notification may cover export activities extending over a maximum of 12 months for the same type of covered electronic equipment, exported to the same facility via the same transit countries. The notification shall include the following information:

“(1) The name, mailing address, telephone number, and if applicable, the Environmental Protection Agency or Resource Conservation and Recovery Act identification number.

“(2) Documentation of licensing of the exporter under subsection (g).

“(3) The name and site address of the consignee and any alternate consignee. [Consignee means the ultimate treatment, storage, or disposal facility in a receiving country to which restricted electronic waste will be sent.]

Explanation: RCRA has already established a “notice and consent” procedure for exports of hazardous waste from the U.S. already in use by the EPA. The bill language above mirrors these procedures, whereby an exporter sends a notice to the EPA of intent to export. For some of the exports (warranty repairs and recalls) the EPA will use this information to request written consent from the recipient and transit countries. Once written consent is provided by the designated “competent authority” in the countries, the exporter is notified by the EPA that the export may proceed. (The notice and consent process is covered in Section)h) below. For the other three items exempted from this bill’s definition of restricted electronic waste (de minimis, tested/working for reuse, and CRT glass-to-glass recycling), these disclosures (above) will assist the federal agencies in enforcing the bill and making sure the items being exported are allowed.

“(4) A statement from the exporter that includes—

“(A) a description of the type and total quantity of covered electronic equipment that will be exported to the consignee;

“(B) the estimated frequency or rate at which such covered electronic equipment is to be exported, and the period of time over which such covered electronic equipment is to be exported;

“(C) all points of entry to and departure from each country through which the covered electronic equipment will pass in transit;

“(D) a description of the means by which each shipment of the covered electronic equipment will be transported, including the mode of transportation and type or types of container; and

“(E) a description of the manner in which the covered electronic equipment will be treated, stored, or disposed of in the receiving country.

“(5) A list of all transit countries through which the covered electronic equipment will be transported, and a description of the approximate length of time the covered electronic equipment will remain in each country and the nature of its handling while there.

“(g) LICENSE.—Covered electronic equipment may only be exported to a country described in subsection (e) [a developing nation] under the exceptions to restricted electronic waste in subsection (b)(3)(B) by an entity licensed by the Administrator under regulations issued under subsection (i)(2).

Exporters of the five items exempted from the definition of restricted electronic waste must adhere to a new licensing process, which will be created by the EPA. A licensing process would pre-screen companies that claim any of these five exceptions. See more discussion under section (i) below. This will aid and streamline enforcement of this bill.

“(h) ADDITIONAL EXPORT CONDITIONS FOR WARRANTIES AND RECALLS.—

“(1) IN GENERAL.—No person shall export covered electronic equipment to a country described in subsection (e) [a developing nation] under the exceptions to restricted electronic waste in subsections (b)(3)(B)(iv) or (v) [refers to exceptions for exports for warranty repairs and product recalls] unless—

“(A) the export is made by an original equipment manufacturer or its contractual agent to the original design manufacturer’s site of last assembly, or to a company contracted to make warranty repairs, for the purposes of business credit to the original equipment manufacturer, repair or refurbishment and subsequent reuse, or replacement;

“(B) the original equipment manufacturer has a presence and assets in the United States; and

Explanation: The bill requires that the OEM claiming this exception have assets in the U.S. so that a foreign manufacturer who sells in the U.S. only via internet cannot use this exemption. It would be easy for a foreign entity or even a U.S. export broker to pose as a manufacturer and then use this OEM to ODM export exemption as a means to evade the export restriction.

“(C) the person who exports the covered electronic equipment—

“(i) keeps copies of normal business records, such as contracts, demonstrating that each shipment of exported covered electronic equipment is intended for repair or refurbishment and subsequent reuse, or replacement, which documentation shall be retained for a period of at least 3 years after the date of export; and

“(ii) submits an annual report to the Administrator on the amount and types of waste resulting from the refurbishment or replacement process, and how it was disposed of or recycled, which shall include—

“(I) number and weight of units of products returned by the original equipment manufacturer for repair, refurbishment, or replacement listed by category and country of destination; and

“(II) the covered electronic equipment, or materials derived therefrom, sent onward to further reuse, disposal, or recycling following repair, refurbishment, or replacement, listed by weight, a description of the wastes, and the ultimate country destination.

Explanation: Because all of these exports for warranty repair or recalls could still potentially result in a large volume of toxic waste exports, and because of the potential for abuse of this exemption, section C above provides additional transparency in the form of an annual report to the Administrator. Presumably this reporting will be incorporated into the licensing procedure to be developed for exporters of these items.

“(2) ACKNOWLEDGMENT OF CONSENT.—

“(A) REQUIREMENT.—No person shall export covered electronic equipment to a country described in subsection (e) [a developing nation] under the exceptions to restricted electronic waste in subsections (b)(3)(B)(iv) or (v) [refers to exceptions for exports for warranty repairs and product recalls] until the Administrator—

“(i) obtains the written consent of the competent authority of the receiving country, and of each country through which the covered electronic equipment will pass in transit; and

“(ii) transmits to the exporter an Acknowledgment of Consent reflecting receipt of each country’s consent.

Explanation: There are many types of documents that can be misconstrued as permission from the importing country. There is one agency in each country that has already been designated the “competent authority” for making legal determinations regarding hazardous waste imports. The bill requires a formal written communication from this designated agency before the export may take place.

Recyclers can generally anticipate their export volumes to their “regular” vendors, and initiate this paperwork early enough so that consent is received by the time they are ready to make the export.

“(B) COUNTRY NOTIFICATION.—In cooperation with other appropriate agencies, the Administrator shall provide notification in writing of an intended export submitted under subsection (f) to the receiving country and any transit countries.

The laws of these countries require that permission be requested for each shipment. The countries don’t give blanket consent, but instead approve imports of specific contents, sent from a specific source to a specific destination. They may, however, approve repeated exports of the same contents

“(C) CONSENT AND EXPORTER NOTIFICATION.—When the receiving country and all transit countries consent in writing to the receipt or transit of the covered electronic equipment, the Administrator shall transmit an Acknowledgment of Consent to the exporter. The consent from a receiving or transit country may be for a notice of multiple shipments or a specified duration as described in subsection (f). The exporter shall attach a copy of the Acknowledgment of Consent to the shipping papers or equivalent documents to ensure that the Acknowledgment of Consent accompanies the shipment of covered electronic equipment.

“(3) WITHDRAWAL OF CONSENT.—Where the receiving country or a transit country objects to receipt or transit of the covered electronic equipment, or withdraws a prior consent, the Administrator shall notify the exporter in writing.

“(i) REGULATIONS.—Not later than 18 months after the date of enactment of this section, the Administrator shall issue regulations for carrying out this section, including—

“(1) testing requirements for covered electronic equipment proposed to be exported under subsection (b)(3)(B)(ii); [the exception for tested and functional equipment]

“(2) establishing a process for licensing entities under subsection (g);

Explanation: Currently, it’s very easy to export e-waste. Companies collect old products, fill a container, sell it to a broker, and send it off. This bill permits e-waste exports only from companies whose paperwork shows they are appropriately licensed by the EPA to export. A licensing process, would give the EPA ability to establish benchmarks companies must meet, in areas such as training, competence and capacity, contracts, etc. before being allowed to export. For instance, if a company indicates that it seeks a license to export for reuse, it would have to meet benchmarks showing it has capacity and equipment to test all equipment for functionality.

“(3) in consultation with the appropriate Federal agency or agencies, provisions for an efficient export control regime which will allow for—

Explanation: The enforcement provision needs to be developed with multiple agencies (EPA and ICE at a minimum) during rulemaking.

- “(A) requiring a person exporting under this section to use appropriate labeling or marking, distinguishing among—
- “(i) covered electronic equipment as permitted under this section;
 - “(ii) restricted electronic waste described in this section; and
 - “(iii) tested working covered electronic equipment as permitted under this section; and
- “(B) enforcement mechanisms, tests, and procedures in coordination with enforcement procedures administered by other appropriate Federal agencies; and
- “(4) establishing a registry of violators, where by any person or entity found to be exporting restricted electronic waste in violation of this section shall be listed on a public registry on a website maintained by the Administrator for a period of 5 years after each violation.

Explanation: Many exporters find it cheaper to pay for violations than to change their exporting business model. This section seeks to correct this incentive to continue to act in an egregious fashion. If potential clients could consult a list that identifies companies which have been found to export in violation of the law, many such clients would likely stay away from a known law violator. Therefore, this public disclosure will create a disincentive for companies to violate the law.

“(j) **CIRCUIT BOARDS.**—For the purposes of export to Organization for Economic Co-operation and Development member countries, circuit boards shall be subject to the Amber Control Procedure as described in the Organization for Economic Co-operation and Development Control System for waste recovery.”

Explanation: This section closes a potential loophole for exporting circuit boards via OECD countries. Exporters could potentially use OECD-member countries like Mexico (classified herein as developed) or Canada as a transit stop (on the way to a developing nation) to transport hazardous circuit boards. Mexico and the U.S. are both parties to the OECD treaty. But circuit boards are not on the OECD amber list, which is the list of hazards that require the U.S. to notify Mexico of these exports. But the OECD treaty allows countries to modify the amber list on a national basis. This section would carry out that intent.

(b) **TABLE OF CONTENTS AMENDMENT.**—The table of contents for the Solid Waste Disposal Act is amended by adding after the item relating to section 3023 the following new item: “Sec 3024. Electronic waste export restrictions.”

SECTION 3: ENFORCEMENT.

(a) **CRIMINAL PENALTIES.**—Section 3008(d) of the Solid Waste Disposal Act (42 U.S.C. 6928(d)) is amended—

- (1) by striking “or” at the end of paragraph (6);
- (2) by inserting “or” at the end of paragraph (7)(B); and
- (3) by inserting after paragraph (7) the following new paragraph: “(8) knowingly exports restricted electronic waste in violation of section 3024;”.

(b) **INSPECTIONS.**—Section 3007(a) of the Solid Waste Disposal Act (42 U.S.C. 6927(a)) is amended—

- (1) by inserting “or restricted electronic wastes” after “or has handled hazardous wastes”; and
- (2) by inserting “or restricted electronic wastes” after “or other place where hazardous wastes”.

SECTION. 4. RARE EARTH MATERIALS RECYCLING RESEARCH INITIATIVE.

(a) **DEFINITIONS.**—In this section:

(1) **ADMINISTRATOR.**—The term “Administrator” means the Administrator of the Environmental Protection Agency.

(2) **INITIATIVE.**—The term “Initiative” means the Rare Earth Materials Recycling Research Initiative established under subsection (b).

(3) **RARE EARTH MATERIAL.**—The term “rare earth material” means any of the following chemical elements in any physical form or chemical combination:

(A) Scandium.

(B) Yttrium.

(C) Lanthanum.

(D) Cerium.

(E) Praseodymium.

(F) Neodymium.

(G) Promethium.

(H) Samarium.

(I) Europium.

(J) Gadolinium.

(K) Terbium.

(L) Dysprosium.

(M) Holmium.

(N) Erbium.

(O) Thulium.

(P) Ytterbium.

(Q) Lutetium.

(R) Other elements identified by the Secretary as rare or in critical supply.

(4) **SECRETARY.**—The term “Secretary” means the Secretary of Energy.

(b) ESTABLISHMENT.—Not later than 120 days after the date of enactment of this Act, the Secretary, in consultation with the Administrator and the heads of other appropriate Federal agencies, shall establish the Rare Earth Materials Recycling Research Initiative to assist in and coordinate the development of research in the recycling of rare earth materials found in electronic devices.

Explanation: Several Rare Earth Materials are used in electronics. Yet little of this material is recovered by common electronics recycling processes, for a variety of reasons. This bill establishes a research initiative so we can better understand why these important materials are not being recovered, and what could help increase their recovery volumes.

(c) GRANTS.—Under the Initiative, the Secretary shall establish a competitive research application program under which the Secretary shall provide grants to applicants to conduct research on one or more of the following activities:

- (1) The safe removal, separation, and recycling of rare earth material from electronics.

(2) Technology, component, and material design of electronics more suitable for disassembly and recycling of rare earth material.

(3) Collection, logistics, and reverse supply chain optimization as related to recycling rare earth materials from electronics.

(d) GRANT REQUIREMENTS.—The Secretary shall issue requirements for applying for grants under the Initiative.

Updated: June 24, 2011