



Commonwealth of Massachusetts

Extended Producer Responsibility Commission

ADVISORY GROUP: ELECTRONICS MEETING 2

Monday, July 28, 2025 | 1–3 p.m.
via Zoom

Housekeeping

Housekeeping



- Please put your full name and affiliation in the chat
- Be sure to change your Zoom display name to include your affiliation as well



Reminders regarding advisory groups

- Charged with **performing research and presenting findings** to the Commission
- Advisory groups will meet at least twice; this is the second meeting of the electronics EPR advisory group
- Findings on electronics EPR should be completed by **Friday, August 29**, to be shared at the September 17 full Commission meeting
- Deliverables from advisory groups are intended to be **fact-based, neutral** findings to assist the Commission in making sound decisions



Meeting goals

- Review content supplied since Meeting 1
- Assess missing data
- Discuss preliminary pros and cons of an electronics EPR approach



Meeting agenda

- Presentation of combined findings
- Discussion: questions? missing data? pros and cons of electronics EPR approach?
- Next steps
- Meeting feedback

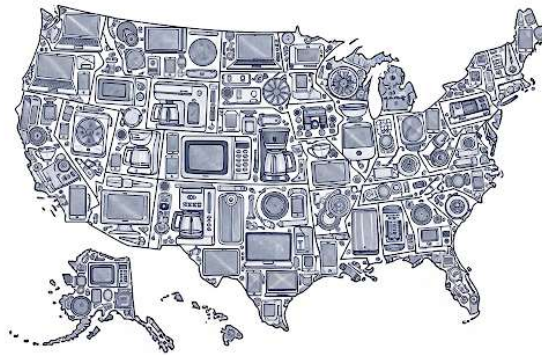
Presentations



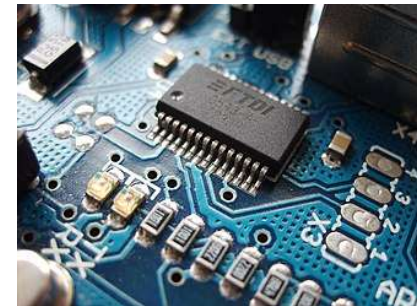
Electronics waste: the problem



average of 24
devices per
household



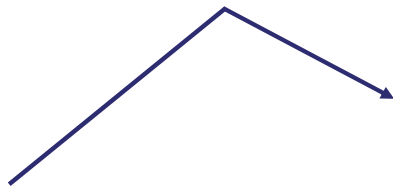
3 billion electronic
products in the
United States



complex
composition means
tough disassembly



Electronics waste: trends



electronic waste recycling
peaked in 2015 and has
been steadily declining



electronic materials
are getting lighter



many problematic materials
have been designed out of
products



Electronics waste: environmental concerns



open-air burning and
acid baths to recover
electronic components



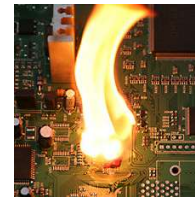
toxic materials
leaching into the
environment



worker exposure to
contaminants such as lead,
mercury, cadmium, and arsenic



irreversible health
effects: cancers,
miscarriages,
neurological damage,
diminished IQ

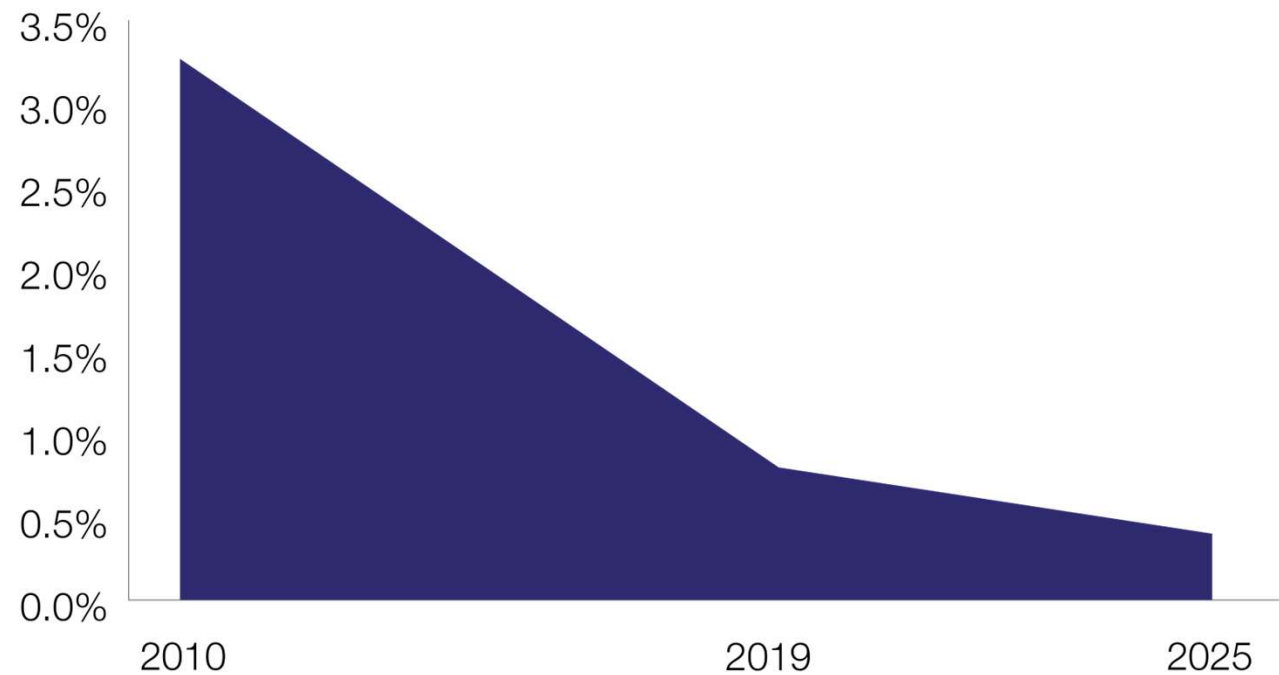


brominated flame-
retardant contents
linked to endocrine
disruption and
thyroid dysfunction



Electronics waste in Massachusetts: diversion rates

Figure. — Percent change in computer-related electronics in Massachusetts municipal solid waste





Electronics waste collection in Massachusetts: items

- \$0–\$50+** fees for electronics waste recycling collection
- 276** municipalities reporting TV and computer collection
- 268** municipalities reporting collection of additional electronics (DVDs, VCRs, phones, stereos, etc.)

Electronics waste collection in Massachusetts: convenience



- 126 municipalities report waste drop-off at small transfer stations
- 110 municipalities report curbside waste collection
- 29 municipalities report both curbside and drop-off at small transfer stations
- 11 municipalities have subscription trash collection and did not indicate how e-waste is collected

Electronics waste collection in Massachusetts: frequency



214 municipalities collect electronic waste year-round

62 collect electronic waste at varied frequencies



Electronics waste recycling: certifications



R2 (Sustainable
Electronics Recycling
International)



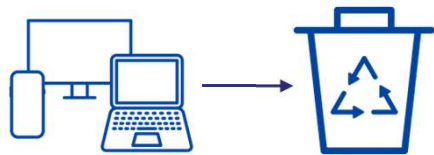
e-Stewards



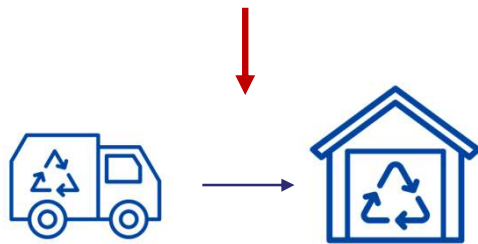
International
Organization for
Standards (ISO)



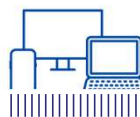
Electronics waste recycling process



1. Consumer drops off electronic waste with collector



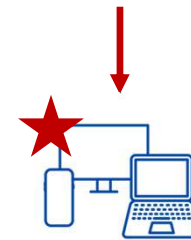
2. Collector delivers to recycler



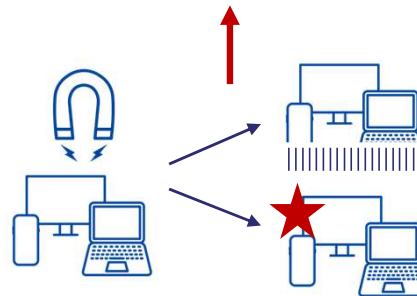
4. Process separates waste into commodities, especially high-value metals



5. Commodities shipped to vendors (demand varies and prices fluctuate)



6. Commodities processed and manufactured into new items



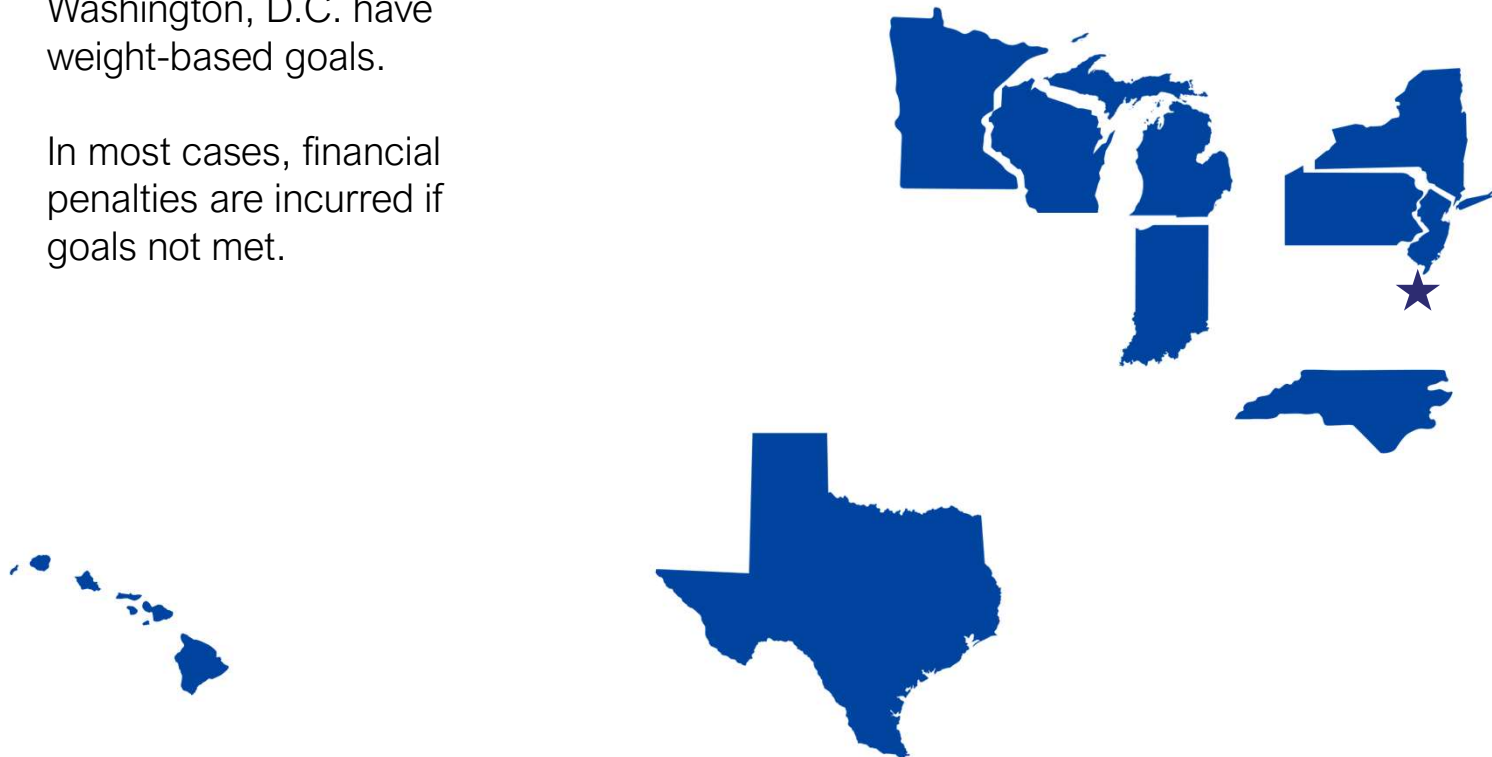
3. Recycler destroys personal information, then resells, shreds, or manually dismantles device



Electronics waste EPR in other states

Ten states plus
Washington, D.C. have
weight-based goals.

In most cases, financial
penalties are incurred if
goals not met.





Electronics waste EPR in other states



Fourteen states use other EPR parameters such as takeback programs, market share, and educational programs.

Fees and rates are set through a variety of means.





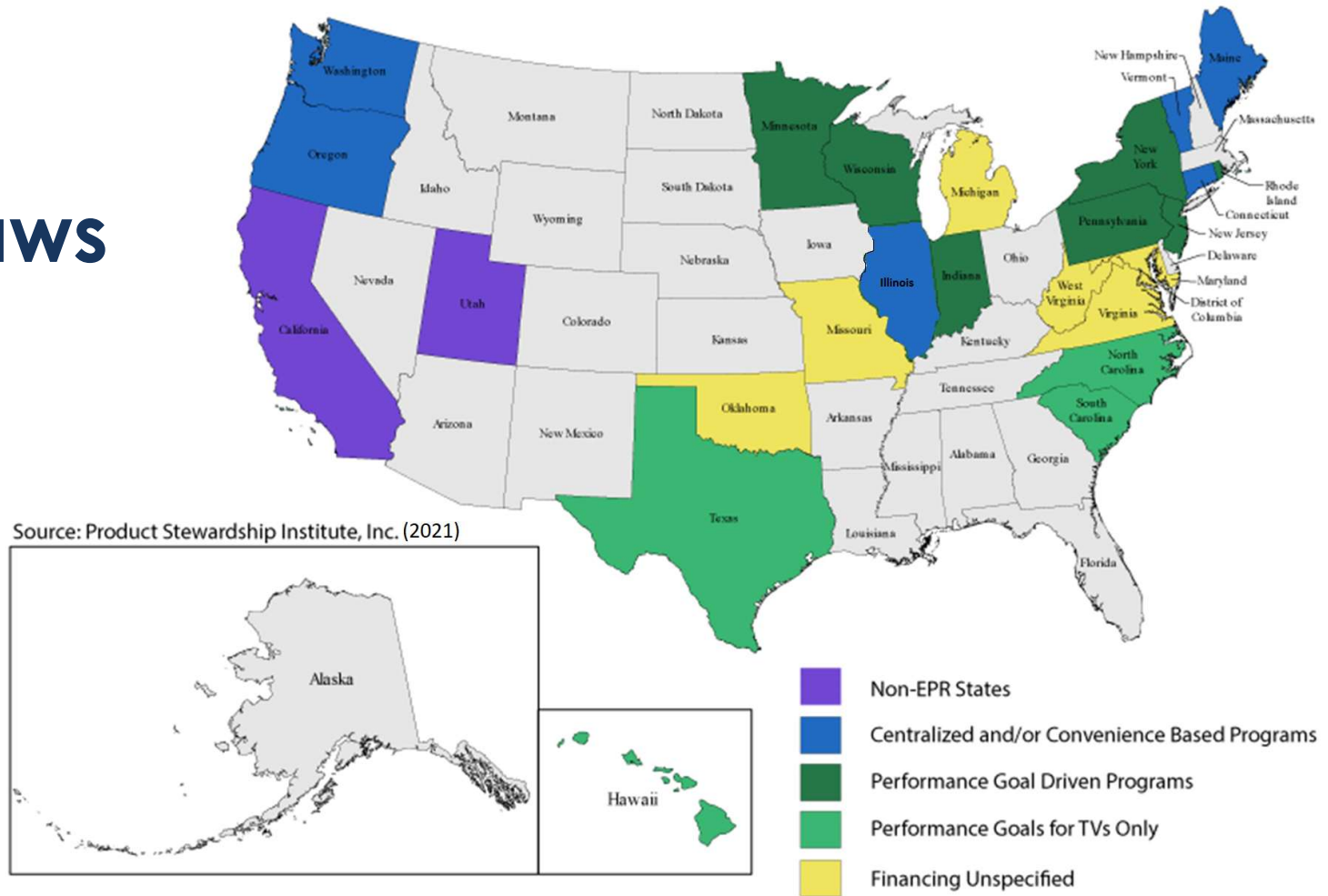
Electronics waste EPR in other states



California has a point-of-sale system, a fee consumers pay. It is remitted to the state, which then reimburses the collection and recycling system for those specific electronics.

Types of Electronics Recycling Laws in the U.S.

All laws are producer funded and managed (to varying degrees) except California, which is consumer-funded and government-managed, and Utah, which does not specify funding and lacks most EPR elements. PSI considers these laws to be product stewardship but not EPR.



Typical Implementation Challenges of Older Laws

- Limited scope of products and participating entities does not meet need.
- Weight-based goals interpreted by producers as ceiling vs. floor—stopped paying, destabilized program funding; municipalities left to cover costs.
- As weight of electronic devices decreased, weight-based metrics are insufficient measure of program success.
- Lack of convenience standards limits access to services.
- Lack of a coordinating body (producer responsibility organization (PRO)/clearinghouse) contributes to statewide inconsistency of outreach & education & awareness.
- Inadequate program funding where no funding mechanism defined.



Elements of Stable Electronics EPR Programs

SCOPE Comprehensive	RESPONSIBLE PARTY Brands, Manufacturers, Importers	STEWARDSHIP ORG Individual or Multiple; PRO/coordinating body	COVERED ENTITIES Residents, schools, small businesses, gov'ts
FUNDING Producer funded by market share	PERFORMANCE GOALS Minimum goals based on prior year or formula	CONVENIENCE Min. based on population & distance; min current convenience level	RECYCLER CERTIFICATION e-Stewards or R2 certification required
OPERATING STANDARDS Materials mgt hierarchy; authority regulates; all eligible collection sites can participate.	STEWARDSHIP PLAN Describes how program will be implemented to meet statute	OUTREACH EDUCATION Campaign reaches all residents; education materials for retailers; outreach evaluation	ANTI-TRUST Aligns with other EPR laws; no negative effect on market competition
PREEMPTION No pre-emption of existing local laws	DISPOSAL BAN Phased-in disposal ban	PENALTIES & ADMIN FEE Sales ban + enforcement penalties; Producers cover agency oversight costs	AUDIT & REPORTING Annual program audit, including outcomes

Discussion



- What questions do you have that would help clarify the right path to electronics EPR? What data is missing?
- What are the pros and cons you see of existing EPR programs throughout the U.S.?

Brainstorming



Next steps

- Draft background document on electronics to share with the Commission is due **Friday, August 29**
- Initial EPR Commission meeting on electronics is September 17, 2025, 9:30 a.m. to 12:30 p.m.

Feedback