February 16, 2024

To: Maryland House Environment and Transportation Committee
Re: HB830 Covered Electronic Devices Recycling Program – Establishment

I'm Kitty McIlroy, here as President of Maryland Recycling Network, to support HB0830, following testimony I gave to the U.S. Senate this past July, on this exact issue. I also bring my experience managing electronics recycling contracts over the last 10 years at the Northeast Maryland Waste Disposal Authority. I am not speaking on behalf of the Authority.

The Maryland Recycling Network (MRN) promotes sustainable reduction, reuse and recycling (the 3 "R's"), to ensure that the use of virgin materials is minimized, materials otherwise destined for disposal are reused or recycled and there is a strong demand for buying products made with recycled material content. We achieve these goals through education programs, advocacy activities to affect public policy, technical assistance efforts, and the development of markets to purchase recycled materials and manufacture products with recycled content.

Maryland Recycling Network members include municipal recycling managers, private sector and non-profit recyclers and citizens who support recycling. We have direct experience operating recycling and composting programs at the county and municipal government level. We know the ins and outs of recycling in Maryland. Our experience informs our comments. We thank Delegate Stein for sponsoring this bill.

Maryland's e-cycling plummeted since the market downturn of 2014 and has not recovered. We were recycling over 19,000,000 million residential pounds per year, now we are recycling under 8,000,000 pounds per year. Local government contracts began to see costs and many started landfilling televisions and computer monitors, the bulk of e-waste. Only 8 of 23 Counties recycle all electronics year-round, without resident drop off fees.

Just six Maryland Jurisdictions have spent over $8,000,000 since 2014 to run these programs.

This is unsustainable.

This bill will take that financial burden off local government, grow local jobs, and increase our domestic supply of rare earth minerals and precious metals for the auto, jewelry and electronics industries.

It will allow jurisdictions to divert much needed tax revenues to other critical public sector services, eliminate fees at public collection sites, and expand programs, especially for rural areas.

Maryland Recycling Network
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Maryland already has a consumer fee for tire recycling. This bill complements that law, to ensure difficult material is responsibly managed.

Maryland has already proven itself to be a leader, by passing the 3rd e-waste law in the country, back in 2005. We are asking you to lead once again, and finish building on what is already in place.

The Maryland Recycling Network (MRN) stands ready to serve as a sounding board and resource for legislators and others interested in pursuing our mission. Please do not hesitate to contact MRN via email phoustle@marylandrecyclingnetwork.org, phone 301-725-2508 or mail - MRN, PO Box 1640, Columbia MD 21044 if you have any questions or would like additional information regarding the above.

We look forward to working with you to improve Maryland's recycling programs and thank you for your consideration and support.

Sincerely,

Kitty McIlroy

Kitty McIlroy
President
Maryland Recycling Network

Background

Due to costs of recycling, approximately only 8 out of 23 Counties/City of Baltimore in Maryland are able to provide to their residents free (at time of drop off), year-round acceptance of all types of municipal electronics for recycling, including flat screen and CRT Glass Tube televisions and computer monitors, historically the bulk of material by weight and volume in the municipal electronics stream. These jurisdictions include Baltimore City, Baltimore County, Calvert County, Charles County, Howard County, Montgomery County, Prince George's County and Somerset County. The existing Statewide Electronics Recycling Program (SERP) has been unable to provide the funding needed for local government to run these programs. This means millions of pounds of electronics are likely being landfilled every year. Detail on the existing SERP shortfalls can be found here.

MDE provided a space for government and industry (retailers and manufacturers) to discuss electronics recycling and the current law during the 2015 Electronics Recycling Department Workgroup. The stakeholders discussed in detail the current requirements and benefits, as well as shortcomings, one of those being the lack of funding directed to municipalities for actual recycling activities.

Maryland Recycling Network then chaired a Workgroup with Member/Non-Member Participation, beginning late 2021, including stakeholders from government and electronic recyclers, to discuss the MDE Workgroup findings and provide a set of policy recommendations to improve the current law. More specifically, stakeholders recommended replicating what is working in other states and applying it to the SERP. Many in both the public and private sector believe a hybrid consumer fee and manufacturer fee can succeed in this state, using California's consumer fee model to supplement the existing manufacturer fee already in place in Maryland. Stakeholders recommended that rather relying on infrequent grant funding, local government should be provided a sustainable source of funding, for operating collection sites and hiring electronic recyclers. These recommendations became SB0686/HB0830 Covered Electronic Devices Recycling Program.

A Resolution adopted by The United States Conference of Mayors at their 2017 Annual Meeting, also supports utilizing a visible consumer fee to support electronics recycling.

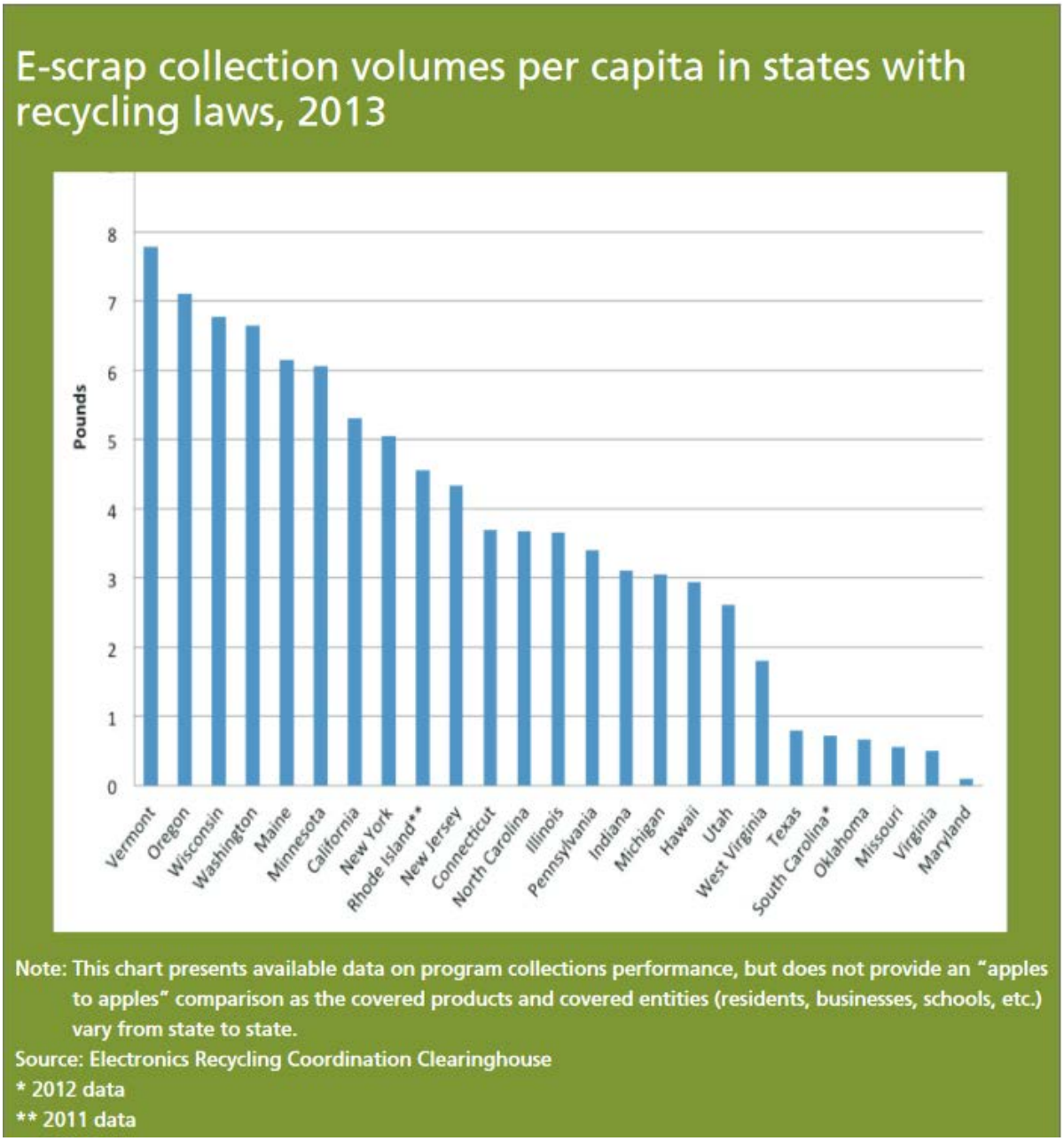
Additionally, the Pennsylvania Legislature is considering passing a consumer fee (eco fee) to be added to the purchase of electronics to assist in funding electronics recycling in the state. The House Consumer Protection, Technology and Utilities Committee seem to be supportive and described the Bill Sponsor, Representative Lisa Borowski's, efforts as "Herculean."

Furthermore, no federal law exists to mandate electronics recycling, and only 25 states along with Washington D.C. have some form of an e-waste law. The United States has not joined 187 countries and the European Commission in ratifying the Basel Convention, an international agreement governing the transboundary movements of hazardous wastes and their disposal.

As a result of this bill, MDE will be able to maintain a list of Authorized Recyclers eligible for reimbursement, which will increase transparency of national and international shipments of e-waste. Authorized Recyclers will have requirements for themselves and certified downstream markets, in order to guarantee certain environmental standards. This would support stronger environmental protection and prevent unauthorized exports, while creating jobs and supporting economic growth in the state, especially for those local electronics recyclers that operate here in Maryland.

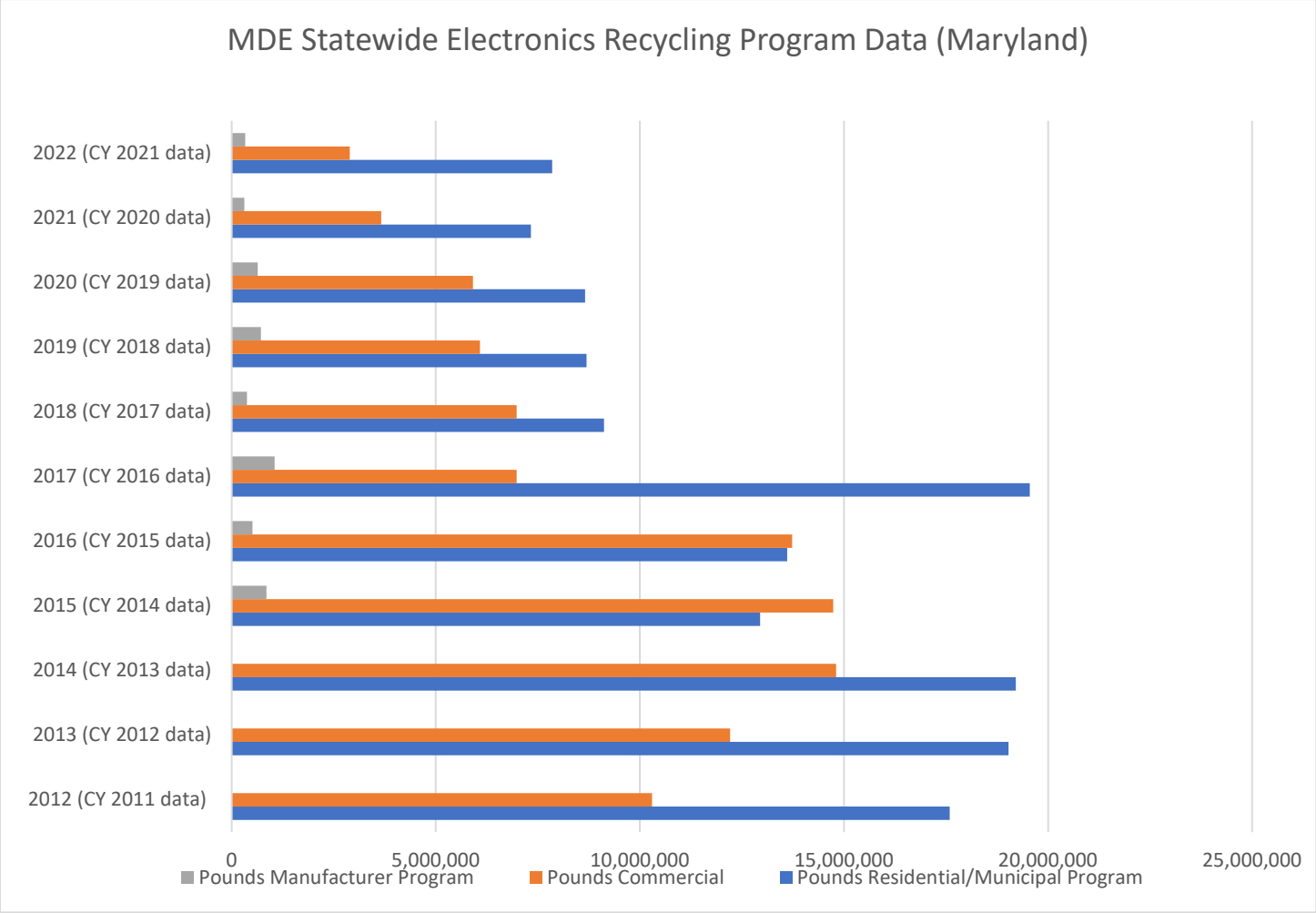
"The proliferation of electronic devices has contributed to the accelerated surge of greenhouse gas (GHG) emissions in e-waste, according to a new study in Circular Economy. E-waste GHG emissions rose 53

percent between 2014 and 2020. Researchers anticipate e-waste will annually generate 852 million metric tons of CO2 compounds by 2030…Increasing the useful lifespan expectancy of electronic devices by 50%–100% can mitigate up to half of the total GHG emissions," the study's authors stated. "Such outcomes will require coordination of eco-design and source reduction, repair, refurbishment, and reuse…The current global rate of e-waste recycling stands at 17.4 percent, with Europe and the Americas responsible for the majority of waste generated. The study noted that Europe's recycling rate stands above other countries at 42.5 percent, following by Asia at 11.7 percent and the Americas at 9.4 percent…Researchers found that between 2013 and 2020, "the useful lifespan of average electronic devices such as desktops, laptops, and smartphones decreased by 41%, 22%, and 30%, respectively."
Source: [E-Waste Emissions Jump 53 Percent Between 2014 and 2020 (waste360.com)]



Source: [E-Scrap Newsletter Article (March 2015)]

MDE Statewide Electronics Recycling Program Data (Maryland)						
	Pounds					
Year	Residential/Municipal Program	Commercial	Manufacturer Program	Manufacturer Program Share of Total Pounds	Residential Program Share of Total Pounds	Commercial Share of Total Pounds
2012 (CY 2011 data)	17,591,221	10,302,000	N/A	N/A	63%	37%
2013 (CY 2012 data)	19,033,550	12,214,000	N/A	N/A	61%	39%
2014 (CY 2013 data)	19,208,026	14,808,000	N/A	N/A	56%	44%
2015 (CY 2014 data)	12,949,658	14,736,000	853,400	3%	45%	52%
2016 (CY 2015 data)	13,610,620	13,734,000	512,000	2%	49%	49%
2017 (CY 2016 data)	19,554,907	6,978,000	1,050,000	4%	71%	25%
2018 (CY 2017 data)	9,120,499	6,978,000	371,200	2%	55%	42%
2019 (CY 2018 data)	8,691,452	6,080,000	716,000	5%	56%	39%
2020 (CY 2019 data)	8,656,008	5,910,000	638,100	4%	57%	39%
2021 (CY 2020 data)	7,329,304	3,664,540	312,780	3%	65%	32%
2022 (CY 2021 data)	7,853,593	2,891,080	330,820	3%	71%	26%
Total	**143,598,838**	**98,295,620**	**4,784,300**	**2%**	**58%**	**40%**
Source: Maryland Solid Waste Management and Diversion Annual Reports: https://mde.maryland.gov/programs/land/Pages/LandPublications.aspx						



Manufacturer fees collected under existing law do not cover costs for local government to operate recycling programs. All grants provided to date are listed below:

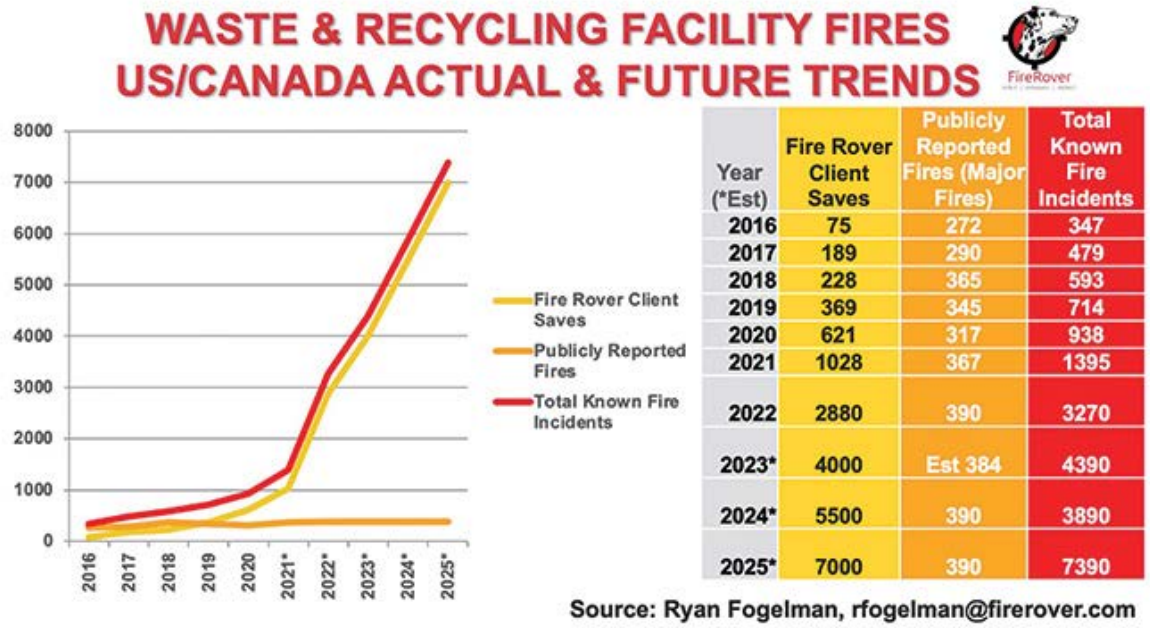
MDE Electronics Recycling Grants to Local Government	
Fiscal Year	Total Grants Issued
2008	$190,000
2009	$616,552
2015	$500,000
2016	$250,000

Sources: Maryland Department of the Environment
2015 Electronics Recycling Department Workgroup
news.maryland.gov/mde/2016/07/22/department-of-the-environment-awards-grants-totaling-250000-for-electronics-recycling-in-maryland/

Electronics Recycling Costs to Jurisdictions*													
	CY 2012	CY 2013	CY 2014	CY 2015	CY 2016	CY 2017	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022	CY 2023	**Total**
Anne Arundel County	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Baltimore City**	$0.00	$0.00	$101,353.16	Unknown	Unknown	$22,998.93	$ 90,364.65	$ 128,671.74	$ 157,526.67	$ 210,534.80	$ 149,030.28	$ 80,691.80	$941,172.03
Baltimore County	$0.00	$0.00	$0.00	$0.00	$0.00	$ 126,824.30	$ 121,773.60	$ 156,026.90	$ 170,999.40	$ 143,225.60	$ 115,064.04	$ 89,711.92	$923,625.76
Carroll County	$0.00	$0.00	$0.00	$0.00	$0.00	$ 20,770.56	$ 23,865.60	$ 37,280.60	$ 42,885.40	$ 34,397.60	$ 30,538.72	$ 18,881.00	$208,619.48
Frederick County***	$0.00	$0.00	$36,753.16	Unknown	Unknown	Unknown	Unknown	$ 34,160.64	$ 28,853.62	$ 24,869.88	$ 24,502.02	$ 20,811.90	$169,951.22
Harford County	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Howard County	$0.00	$0.00	$ 211,797.47	$ 195,366.08	$ 193,463.50	$ 193,037.28	$ 158,821.44	$ 197,481.16	$ 188,424.60	$ 141,089.80	$ 109,497.00	$ 53,723.40	$1,642,701.73
Montgomery County	$0.00	$0.00	$ 448,836.35	$ 464,707.34	$ 440,131.12	$ 455,529.60	$ 363,510.40	$ 475,527.06	$ 479,147.72	$ 482,806.12	$ 436,059.54	$181,908.58	$4,228,163.83
Total	**$0.00**	**$0.00**	**$ 798,740.14**	**$ 660,073.42**	**$ 633,594.62**	**$ 819,160.67**	**$ 758,335.69**	**$ 1,029,148.10**	**$1,067,837.41**	**$ 1,036,923.80**	**$ 864,691.60**	**$ 445,728.60**	**$8,114,234.05**
*$0.00 refers to either $0.00 in costs or revenues to Jurisdictions and/or program years where Jurisdictions received revenues for their electronics													
**Baltimore City: July 1, 2014-December 31, 2014 cost data is unknown. January 1, 2017-September 30, 2017 cost data is unknown													
***Frederick County: July 1, 2014-December 31, 2014 cost data is unknown.													
Sources: Northeast Maryland Waste Disposal Authority data and Jurisdiction data													

Electronics Recycling Pounds													
	CY 2012*	**CY 2013****	**CY 2014*****	CY 2015	CY 2016	CY 2017	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022	CY 2023^	**Total**
Anne Arundel County	2,928,311	**2,848,253**	**593,091**	550,000	448,433	493,930	478,733	477,788	407,989	395,133	406,000	366,000	10,393,661
Baltimore City	1,276,791	1,421,668	1,141,000	1,136,000	183,883	171,673	322,965	476,174	564,143	751,910	532,251	288,185	8,266,643
Baltimore County	3,640,420	**3,618,293**	**841,802**	729,653	722,172	650,381	624,480	512,060	604,080	511,520	410,943	556,049	13,421,853
Carroll County	917,006	**699,522**	**133,757**	122,861	109,180	108,180	124,300	120,260	138,340	110,960	98,512	75,500	2,758,378
Frederick County	703,320	619,221	631,160	585,180	352,892	347,780	739,420	245,760	207,580	178,920	177,800	165,020	4,954,053
Harford County****	314,500	281,260	327,180	244,420	246,740	250,260	252,240	213,680	275,240	230,940	191,620	165,000	2,993,080
Howard County	1,439,580	1,485,129	1,460,672	1,347,352	1,334,231	1,206,483	992,634	1,165,014	1,108,380	847,880	644,100	648,800	13,680,255
Montgomery County	3,519,553	3,861,679	3,095,423	3,204,878	3,035,387	2,847,060	2,271,940	2,440,209	2,462,261	2,471,820	2,224,880	1,920,400	33,355,490
Total	**14,739,481**	**14,835,025**	**8,224,085**	**7,920,344**	**6,432,918**	**6,075,747**	**5,806,712**	**5,650,945**	**5,768,013**	**5,499,083**	**4,686,106**	**4,184,954**	**89,823,413**
*Total CY 2012 TVs/Computer Monitors under Anne Arundel County, Baltimore County and Carroll County program: 5,029,014 pounds													
**Total CY 2013 TVs/Computer Monitors under Anne Arundel County, Baltimore County and Carroll County program: 5,101,565 pounds													
***Beginning CY 2014, Anne Arundel County, Baltimore County and Carroll County no longer recycled TVs/Computer Monitors.													
****2012-2023: Harford County's recycler sometimes accepted TVs/Computer Monitors for recycling; but did not recycle CRT glass TVs/Computer Monitors													
^Beginning FY '24 Baltimore County reintroduced TV/Computer Monitor recycling & Baltimore City's program paused due to contract awaiting execution by its Board of Estimates													
Sources: Northeast Maryland Waste Disposal Authority data, Jurisdiction data, and MDE Maryland Recycling Act Report data													

SB0686/HB0830 will provide funding for collection sites to hire staff and implement heat spot and fire detection and suppression technology, a critical safety measure as facility fires from lithium-ion batteries continue to increase.



Year (*Est)	Fire Rover Client Saves	Publicly Reported Fires (Major Fires)	Total Known Fire Incidents
2016	75	272	347
2017	189	290	479
2018	228	365	593
2019	369	345	714
2020	621	317	938
2021	1028	367	1395
2022	2880	390	3270
2023*	4000	Est 384	4390
2024*	5500	390	3890
2025*	7000	390	7390

Source: Ryan Fogelman, rfogelman@firerover.com

“Then came the lithium-ion battery threat that revealed itself in 2018 in the form of increased fire incidents across the globe…This problem is not going away. In fact, the number of lithium-ion batteries forecasted to enter the waste and recycling streams is only growing along with hotter and dryer environments, which leads to a breeding ground for increased fire incidents… The goal is not just to catch a fire when there are flames, but also to understand that there are situations where hot spots can be cooled before they flame. The goal is to set the tripwire as early in the process as possible. This can be done through top-grade thermal detection in combination with smoke, optical flame detection, and advanced data analytics—all coupled with a highly trained agent who is able to weed through false positives to fight only the incidents that need fighting… 2022 was (and 2023 is forecasted to be) the worst year for reported fire incidents …we are heading down a path where investments in solutions like the Fire Rover are considered ‘critical’ to successfully responding to the fire hazards that continue to hit our waste and recycling streams. We need a funding mechanism like the government or the battery manufacturers to help pay for the costs they have created... Investing in proper equipment for the fire department to use onsite can be a huge timesaver and lifesaver. Even going as far as having attached and rollout hoses so the firefighters can immediately start applying suppressant to the affected area can make a huge difference”

Source: Keys to Building a Successful MRF: Before, During, After - Waste Advantage Magazine)

Additional Details of HB0830 & SB0686

1) Establishes a shared responsibility model among local government, MDE, manufacturers, consumers and retailers to fully fund electronics recycling statewide. The bill will insulate programs from unpredictable commodity markets, recession and inflation, to fully fund both collection sites and recycling operations, while manufacturers will fund MDE's administration.

2) Establishes a California modeled consumer fee (advanced recovery fee or eco fee) at the point of purchase of a new covered electronic device (CED) in Maryland, to fund Authorized Collectors and Authorized Recyclers. MDE shall have authority to amend/expand these definitions and fees as needed:

a. Tier 1 CEDs have a fee, to be determined by MDE for a computer monitor, television or video display device.

b. Tier 2 CEDs have a fee, to be determined by MDE, for a laptop computer, personal digital assistant, notebook, reader, tablet device, cell phone, central processing unit of a computer, printer, scanner, copier, and any other computer or electronic device or accessory that has a plug or battery that is designated as a Tier II CED by MDE.

3) Authorized Collectors (such as local government or retailers) are eligible to be reimbursed for the costs of end-of-life CED on-site collection, storage, equipment, heat and fire detection and suppression systems and equipment, transportation, staffing, and education.

4) Authorized Recyclers are eligible to be reimbursed for CED collection, transportation, recycling, refurbishment and reuse.

5) Authorized Collectors and Authorized Recyclers are required to accept CEDs with no charge to the public (residents and businesses). Manufacturers are not eligible to participate in the program nor act as Authorized Collectors and receive reimbursement. Manufacturers are encouraged to continue managing their own recycling programs, independent of the SERP.

6) Terminates the scarcely used manufacturer takeback programs as option under the SERP (which currently allow for reduced annual fees)

7) Reallocates existing annual manufacturer fees to solely fund MDE's administration of the statewide program including certifying and distributing funds to participating Authorized Collectors and Authorized Recyclers, as well as auditing, enforcement and education. MDE shall have the ability to alter the manufacturer fees as needed, in order to adequately fund the administration of the program.

8) MDE shall have the ability to hire a third-party entity to administer the program, as some nonprofits already administer electronics programs on behalf of state departments and are experts in doing so.

9) It will provide stronger environmental protections by authorizing MDE to establish:
a. Baseline of participating Authorized Recycler requirements and certifications, as needed.
b. Baseline of participating Authorized Collector requirements and certifications, as needed.

10) Authorizes MDE to establish reasonable caps on reimbursement rates for participating Authorized Recyclers and Authorized Collectors

11) Establishes an Advisory Council made up of a variety of stakeholders to continuously evaluate and recommend program updates to MDE, as needed. MDE maintains ultimate authority over the SERP.

Summary

HB0830 & SB0686 Covered Electronic Devices Recycling Program shall:

(1) cover the costs of existing programs that local government is currently paying to recyclers to accept electronics
(2) allow jurisdictions to retract existing electronics recycling tipping fees placed on their residents; and
(3) allow jurisdictions to expand financially restricted programs by providing the funds to cover recycling of previously excluded electronics that were ending up disposed.
(4) Expand green collar jobs due to new demand for staffing at collection sites and recycling facilities.
These updates will fully support and fund electronics recycling operations, infrastructure and administration statewide, incentivizing a system of convenience and accessibility for all Maryland residents and businesses to be able to participate equally, especially underserved rural and urban areas.