OCERA

Oklahoma Computer Equipment Recovery Act

("Act"), 27A O.S. § 2-11-601 et seq.

July 2023

Oklahoma Department of Environmental Quality (DEQ)

Land Protection Division, Solid Waste & Sustainability,
Sustainable Materials Management

Submitted to: The Governor, the President Pro Tempore of the Senate,
and the Speaker of the House of Representatives

Executive Summary
Reporting Year 2022

- Recycling electronics is important because they contain recyclable, hazardous, and ignitable materials, as well as nonrenewable materials, which have the potential to affect human health and the environment.
- The purpose of the Act is to establish a convenient and environmentally sound program in Oklahoma for the collection, recycling, and reuse of computer electronics that have reached the end of their useful lives.
- In 2022, there were 30 compliant manufacturers (Table 2); $143,771.98 was collected from annual fees; and 355,488 pounds of electronic waste was collected by manufacturers (Table 1).
- $70,000 of OCERA fees were allocated back into Oklahoma communities to host 3 electronic waste collection events, which collected 41,804 pounds of electronic waste.
- DEQ is funding the Product Stewardship Institute in the 2024 fiscal year to research areas of improvement for OCERA.
- OCERA will continue to serve our citizens.

Introduction

The purpose of the Act is to establish a convenient and environmentally sound program in Oklahoma for the collection, recycling, and reuse of computer electronics that have reached the end of their useful lives.

Properly recycling all electronics is important because they contain:

- Metals, plastic, and glass that can be reused and recycled.
- Precious metals and critical elements including iron, aluminum, copper, and silver. Recovery of these materials is more energy efficient and less polluting than mining them for virgin materials.
- Hazardous materials including lead, cadmium, mercury, manganese, chromium, and nickel, as well as persistent organic compounds including, flame retardants, polychlorinated bisphenols (PCBs), bromophenols, organophosphates, chlorofluorocarbons, polycyclic aromatic hydrocarbons (PAHs), polybrominated diphenyl ethers (PBDEs), and polychlorinated dibenzo-p-dioxins and furans (PCDD/Fs). If these materials are not responsibly recycled, they have the potential to leach into the environment and adversely affect human health and the environment.[1] Human health effects vary widely and include pregnancy, hormone, and growth disruptions, adverse birth outcomes, altered immune functions, bioaccumulation of toxins, and much more, with children being more susceptible.[2]
- Lithium-composed batteries that have high potential to create a spark and start fires in garbage trucks, recycling facilities, landfills, and other disposal facilities, as well as homes and facilities.

Oklahoma is not immune to the potential dangers of improperly disposed electronics. A recycling & transfer center in Tulsa caught fire in April 2022 from the spark of an improperly disposed lithium-ion battery, halting recycling for 11 months, costing up to $12 million in damages, and luckily, no human injuries or fatalities.

Definitions

Covered device: a desktop or notebook computer, or computer monitor which is no longer of use to a consumer. Does not include televisions, any part of a motor vehicle, personal digital assistants, telephones, or medical devices that contain a video displaying device

Minor manufacturer: a manufacturer that sells, produces, or imports between 51 and 999 covered devices in Oklahoma

Major manufacturer: a manufacturer that sells, produces, or imports 1,000 or more covered devices in Oklahoma

Compliant: A manufacturer is compliant when it has submitted its annual report, paid the annual fee, and submitted and implemented the recovery plan.

1 United States Environmental Protection Agency. (December 2019). Basic information about electronics stewardship. https://www.epa.gov/smm-electronics/basic-information-about-electronics-stewardship#02

2 "Health consequences of exposure to e-waste: an updated systematic review." Parvez, et. Al. December 2021. The Lancet Planetary Health. Volume 5, Issue 12, E905-920. DOI: https://doi.org/10.1016/S2542-5196(21)00263-1

Responsibilities

Manufacturers, DEQ, retailers, consumers, and the Office of Management and Enterprise Services share responsibilities of the Act.

Manufacturers that sell, import, or produce 50 or more covered devices in Oklahoma must:

- Adopt and implement a recovery plan
- Permanently and visibly label covered devices with the manufacturer's brand
- Include collection and recovery information for consumers on their websites
- Submit an annual report to the DEQ by March 1.
- Pay an annual fee adjusted for inflation to DEQ by March 1.

DEQ must:

- Review and approve all manufacturer-submitted recovery plans and annual reports, and notify manufacturers within 30 days if noncompliant
- Maintain and make available a list of compliant manufacturers
- Maintain and make available a list of manufacturers that collect additional brands other than their own ("Beyond Brand")
- File and make all annual reports and recovery plans available to the public
- Conduct audits and inspections, take enforcement action, and assess penalties against a manufacturer, retailer, or recycler, when necessary
- Educate the public regarding collection and recovery of covered devices.

Retailers must not sell, or offer for sale, a covered device of a noncompliant manufacturer, or a manufacturer's product that is not properly affixed with the manufacturer's brand label.

Consumers must remove all personal data, or other information, that may be on a covered device that is collected or recovered.

The Office of Management and Enterprise Services must ensure that no state agency contracts with non-compliant manufacturers for the purchase of covered devices.

A Summary of the 2022 Program Status

- $143,771.98 collected from annual fees
- 355,488 pounds of covered devices collected by manufacturers (Table 1)
  - The equivalent weight of one Blue Whale, the largest animal to ever live on Earth!
- 30 compliant manufacturers (Table 2)
- 6 manufacturers offering "Beyond Brand" collection, i.e., offering to collect devices of any brand for recycling, rather than collecting only their own brand. (Table 3)

Table 1.

Pounds of Covered Devices Collected By Manufacturers in 2022

Manufacturer Reported

Manufacturer	Number of Manufacturer-Hosted Collection Events	Pounds
LG Electronics USA, Inc	6	155,020
Dell Marketing, LP	0	139,252
HP Inc	0	50,000
Amazon.com Services LLC	0	9,100
Apple Inc.	0	1,831
Sceptre, Inc	0	250
Acer America Corp	0	13
Google LLC	0	12
Lenovo Inc.	0	4
Microsoft Corporation	0	3
Barnes & Noble (Nook Digital)	0	3
Totals	**6**	**355,488**

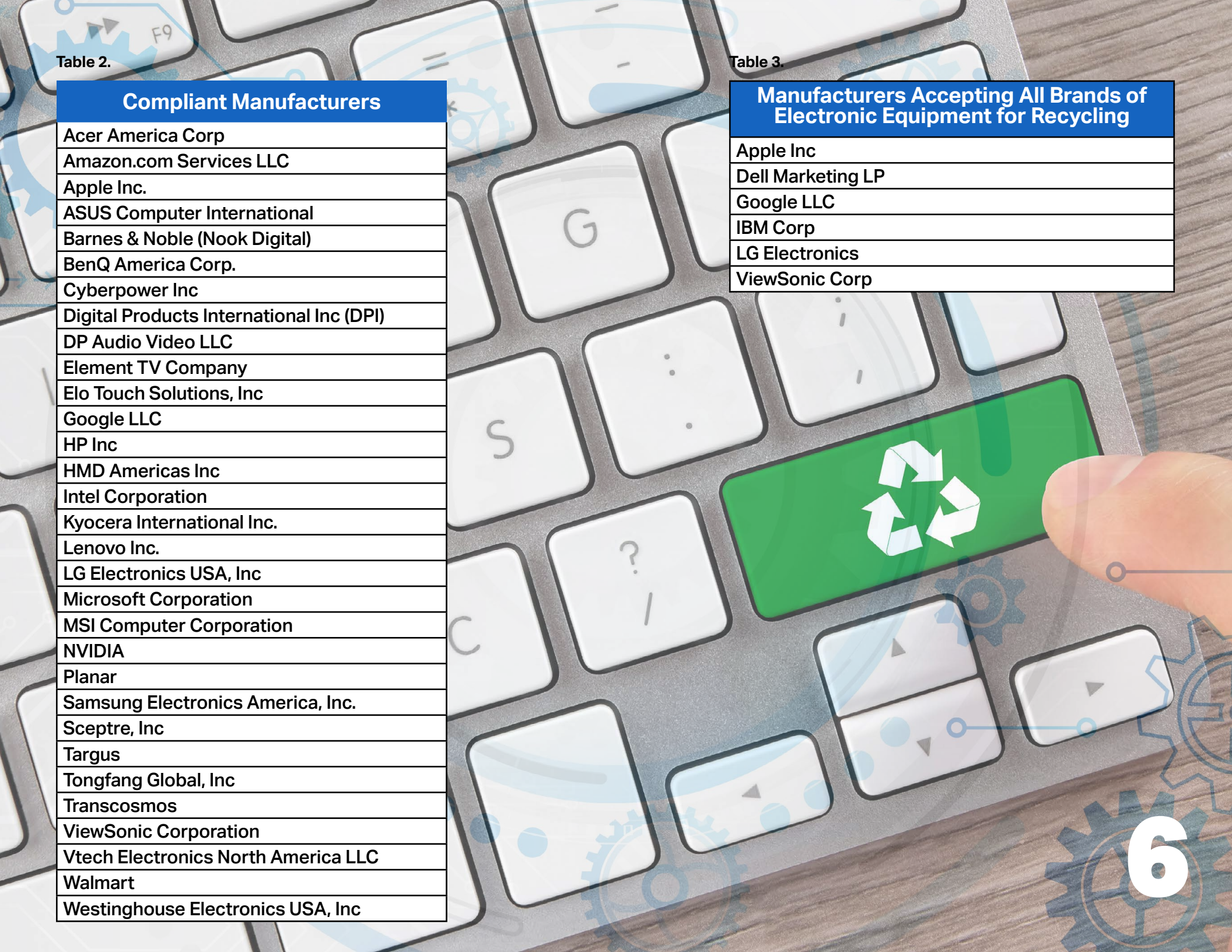
2 https://www.deq.ok.gov/land-protection-division/recycling/

Table 2.

Compliant Manufacturers
Acer America Corp
Amazon.com Services LLC
Apple Inc.
ASUS Computer International
Barnes & Noble (Nook Digital)
BenQ America Corp.
Cyberpower Inc
Digital Products International Inc (DPI)
DP Audio Video LLC
Element TV Company
Elo Touch Solutions, Inc
Google LLC
HP Inc
HMD Americas Inc
Intel Corporation
Kyocera International Inc.
Lenovo Inc.
LG Electronics USA, Inc
Microsoft Corporation
MSI Computer Corporation
NVIDIA
Planar
Samsung Electronics America, Inc.
Sceptre, Inc
Targus
Tongfang Global, Inc
Transcosmos
ViewSonic Corporation
Vtech Electronics North America LLC
Walmart
Westinghouse Electronics USA, Inc

Table 3.

Manufacturers Accepting All Brands of Electronic Equipment for Recycling
Apple Inc
Dell Marketing LP
Google LLC
IBM Corp
LG Electronics
ViewSonic Corp



Enforcement Action

- A $500 late fee was assessed to six manufacturers who did not pay annual fees within 30 days following the due date.
- Two manufacturers do not have their Recovery Plans on file and have been contacted.

Non-compliant manufacturers can become compliant throughout the year if they submit the proper documents or pay the annual fee. In this case, the Compliant Manufacturers list will be updated.

Public Education

DEQ maintains a website with links regarding program information, resources and tools, annual reports, and consumer, manufacturer, and retailer-focused information.

https://www.deq.ok.gov/land-protection-division/recycling/computer-equipment-recycling/

- DEQ speaks at public or private engagements on the topic when requested.
- DEQ answers numerous inquiries from consumers on how to responsibly dispose of electronic devices.
- DEQ promotes statewide collection events on all social media platforms.

Evolving Electronics Industry

The decline in collection weight over the years (Figure 1) can be partially attributed to modern, smaller, and lighter electronics of the present replacing heavier devices of the past. Industry professional, Jason Linnell, the co-founder and executive director of the National Center for Electronics Recycling (NCER), believes there is a need to "re-evaluate how to measure success in collecting and recycling electronics," as many electronics recycling programs across the country measure success in weight. DEQ will continue collaborating with industry stakeholders and researching innovative alternatives to efficiently measure success.

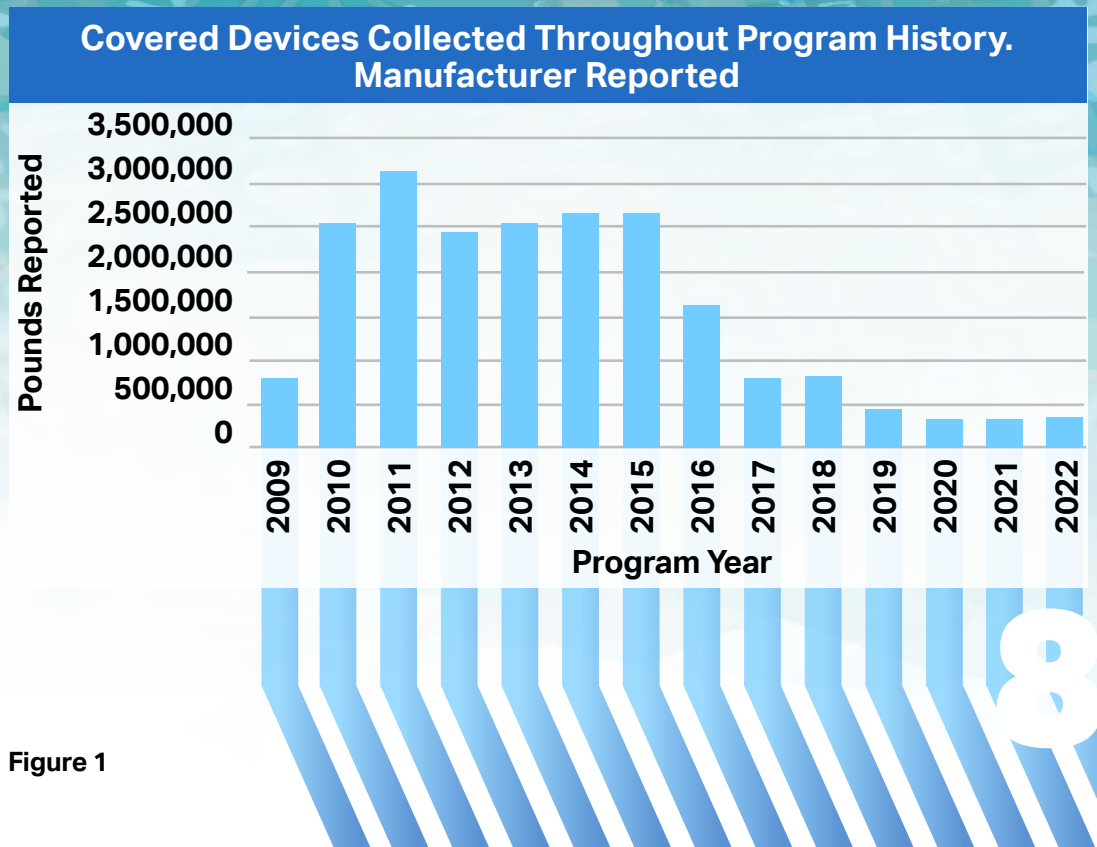


Figure 1

Manufacturer Participation

The decline in collection weight over the years (Figure 1) can also be attributed to manufacturers playing a passive role in collection. One manufacturer held six collection events in 2022, and, as seen in Table 1, collected the highest weight of electronic waste, compared to all other manufacturers which did not host any collection events in 2022. This compares to only nine manufacturer-hosted collection events from 2015-2021. Instead of collection events, most manufacturers only offer mail-back programs, as collection events are not required by the Act.

Slight fluctuations in manufacturer compliance throughout the program (Figure 2) may be attributed to common movement in the industry, such as manufacturers closing, changing their scope of marketing, or merging with other entities over time.

Figure 2

Consumer Convenience

Based on consumer phone calls to DEQ, Oklahomans largely prefer to drop-off their old devices, rather than mail-in. When inquiring about how to recycle e-waste consumers are told to check the manufacturer website for mail-back options and are informed of their drop-off options, which include Best Buy and Staples stores. If these options are not convenient, consumers are told to check for an R2 or e-Steward certified electronic recycler near them.

- https://sustainableelectronics.org/find-an-r2-certified-facility/
- http://e-stewards.org/find-a-recycler/

DEQ uses OCERA manufacturer fees in DEQ's Solid Waste Management Grant Program to fund Collection Event Grants to Oklahoma communities. These events create convenient and free opportunities for consumers to responsibly dispose of their electronic waste in addition to keeping Oklahoma clean by preventing illegal roadside dumping (Image 1).

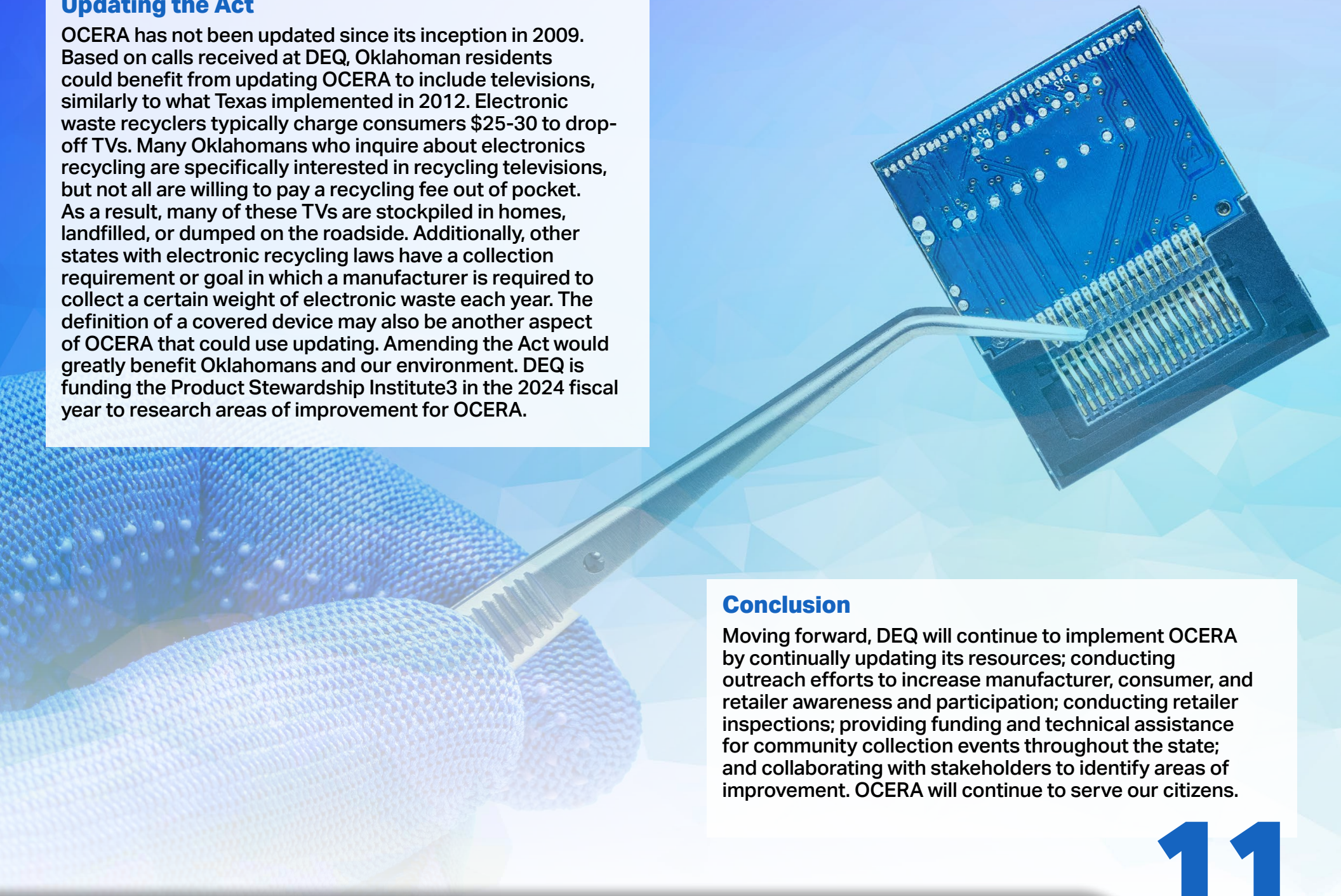
In 2022, DEQ awarded $70,000 in grants for 3 community electronic waste collection events across the state where 41,804 pounds of electronic waste were collected. These events are free for citizens.

As consumers continue to express significant interest in drop-off, rather than mail-back programs, DEQ will continue to supplement OCERA by assisting communities in hosting collection events for electronic waste

Image 1. An illegal roadside dump in rural Oklahoma containing old electronics. Cleanup was funded by DEQ's Solid Waste Management Grant Program.

Updating the Act

OCERA has not been updated since its inception in 2009. Based on calls received at DEQ, Oklahoman residents could benefit from updating OCERA to include televisions, similarly to what Texas implemented in 2012. Electronic waste recyclers typically charge consumers $25-30 to drop-off TVs. Many Oklahomans who inquire about electronics recycling are specifically interested in recycling televisions, but not all are willing to pay a recycling fee out of pocket. As a result, many of these TVs are stockpiled in homes, landfilled, or dumped on the roadside. Additionally, other states with electronic recycling laws have a collection requirement or goal in which a manufacturer is required to collect a certain weight of electronic waste each year. The definition of a covered device may also be another aspect of OCERA that could use updating. Amending the Act would greatly benefit Oklahomans and our environment. DEQ is funding the Product Stewardship Institute3 in the 2024 fiscal year to research areas of improvement for OCERA.



Conclusion

Moving forward, DEQ will continue to implement OCERA by continually updating its resources; conducting outreach efforts to increase manufacturer, consumer, and retailer awareness and participation; conducting retailer inspections; providing funding and technical assistance for community collection events throughout the state; and collaborating with stakeholders to identify areas of improvement. OCERA will continue to serve our citizens.

3 Homepage - Product Stewardship Institute https://productstewardship.us/

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