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# Program Report on Texas Recycles Computers and Texas Recycles Televisions

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External Relations Division

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TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



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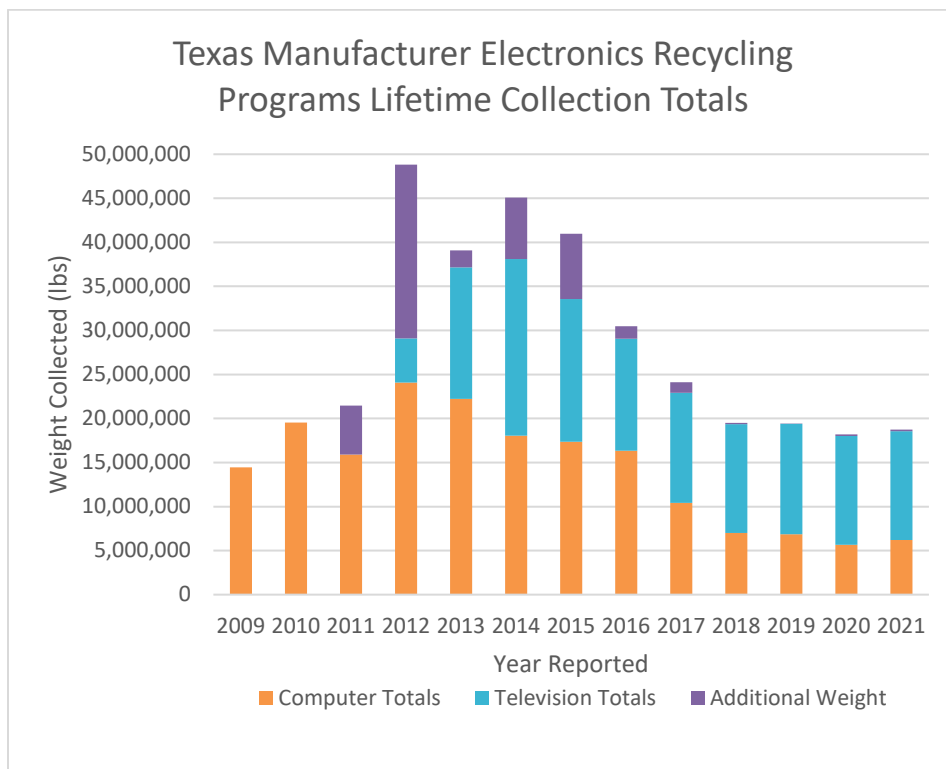
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# Results from Manufacturers' Annual Reports

The Texas Recycles Computers and Texas Recycles TVs programs have been required to submit reports since 2009 and 2013 respectively. Together, these programs have resulted in 315,070,569 pounds of computers and televisions being collected, with 302,334,195 pounds of this being recycled and 68,300,439 pounds being reused. Computer manufacturers also collected an additional 44,806,162 pounds of electronics-related equipment over the lifetime of the program, bringing the total weight of electronics collected to 359,876,732 pounds. For the 2021 calendar year, the programs collected a total of 18,730,300 pounds, comprising 6,217,727 pounds of computers, 176,937 pounds of additional electronic equipment, and 12,335,636 pounds of televisions. See *Chart 1* below for the weights collected since the creation of both programs.

**Chart 1. Texas Manufacturer Electronics Recycling Programs Lifetime Totals**



## Texas Recycles Computers Program

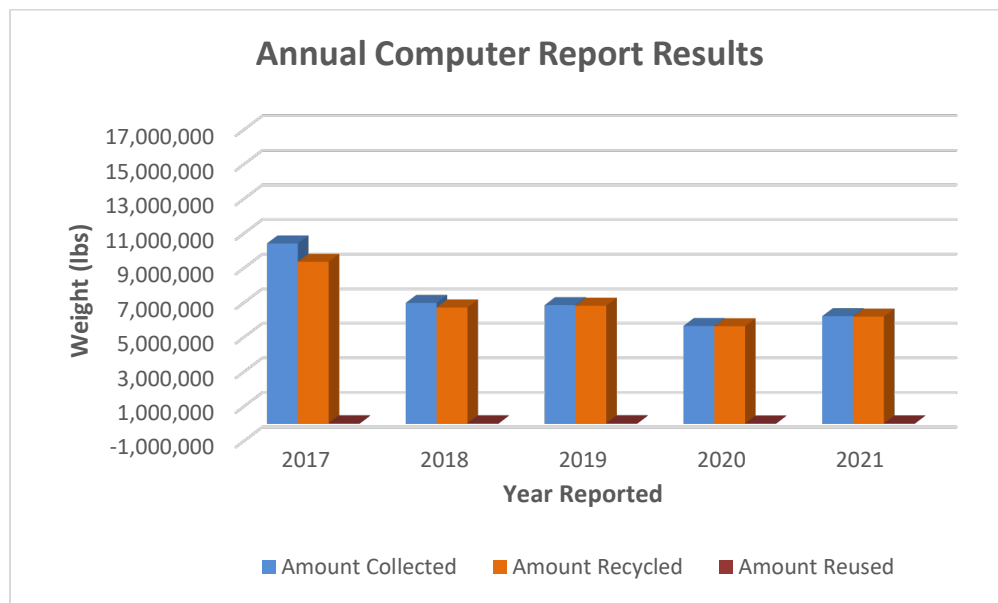
In 2021, the total combined weight of computer equipment collected was 6,217,727 pounds. The total amount recycled was 6,195,992 pounds and the total amount reused was 20,689 pounds. Comparatively, the total weight of computer equipment collected in 2020 was 5,653,234 pounds. Of that collected weight, 5,636,226 pounds were recycled, and 16,770 pounds were reused.

TCEQ allows computer manufacturers to report other electronics collected, in addition to the computer equipment covered under the program. Many computer manufacturers also voluntarily collect other electronics for recycling.

For 2021, manufacturers reported collecting 176,937 pounds of additional non-covered electronics. This number was lower than the 2020 voluntary collection amount of 187,284 pounds. Some of the manufacturers who typically reported voluntary collection weight indicated that they chose not to report additional voluntary collection weight this year, since the electronics were not computer related. The voluntarily reported numbers that include televisions reported under the Texas Recycles TVs program were excluded.

Historical data for the past five years of reporting is reflected in *Chart 2* below.

**Chart 2. Annual Computer Report Results**



Texans have many opportunities to recycle their computer equipment and other electronics outside of the Texas Recycles Computers program. Collection events coordinated by municipalities, local nonprofit groups, private recyclers, and community-oriented businesses are additional ways Texans can recycle their computers. Since some of the recyclers do not report to TCEQ, the agency’s reported number does not fully represent all recycling activity in Texas.

As in previous years, some reports this year listed zero pounds of computer equipment collected, reused, or recycled. A common reason to report collecting no computer equipment is that the manufacturer is a small business with a clientele

limited to surrounding homeowners who do not often buy new equipment. Additionally, in situations where manufacturers' customers are primarily businesses, and personal equipment is rarely sold, little or no personal or home business computer equipment was returned for recycling or reuse.

With the rapid advancement of technology, electronics continue to become lighter and more compact. Manufacturers have reported lower total weight of materials collected year over year. A report published in July 2011 on behalf of the Consumer Electronics Association detailed this manufacturing trend between 2004 and 2010 from cathode ray tubes to lighter flat panel technology for televisions and computer monitors.<sup>1</sup> Additionally, the reuse market for computer equipment is healthy and less costly than hard to recycle devices such as televisions. Lastly, we received notice from manufacturers that collections were temporarily stopped because of the global COVID-19 pandemic. Overall, this may have affected amounts collected in 2021.

*Appendix 1* lists amounts reported by each manufacturer for the 2021 calendar year. A total of three manufacturers failed to report and were removed from the program.

### **Texas Recycles TVs Program**

The weight of television equipment reported as having been collected in 2021 by participating manufacturers was 12,335,636 pounds. Of that collected weight, 12,335,636 pounds were recycled, and zero pounds were reused.

This year, all manufacturers participated in the Market Share option of the television recycling program, in which they are required to collect their assigned market share of television equipment. Of the 21 manufacturers that participated in the program, all 21 reported their 2021 collection data and submitted registrations for 2022.

For the 2022 market share allocation, TCEQ calculated the recycling rate for the 21 reporting manufacturers to be 10.76%. Based on this recycling rate, manufacturers were provided their 2022 market share prior to Dec. 1, 2021. Manufacturers are required to collect at least their market share in 2022, as indicated in *Appendix 2*.

In an effort to help television manufacturers meet their annual registration and reporting requirements, TCEQ created a new registration form (TCEQ-20932), which combines the Annual Registration and Reporting and Recovery Plan forms. This new form reduces paperwork, centralizes TCEQ's review, and streamlines communications with television manufacturers.

As a mechanism to comply with the rules, manufacturers have the option of participating in a Recycling Leadership Program (RLP). Participants in an RLP do not have a market share to collect, but must recycle equipment from a minimum of 200 collections sites, events, or programs available to the public. From 2017-2021, no

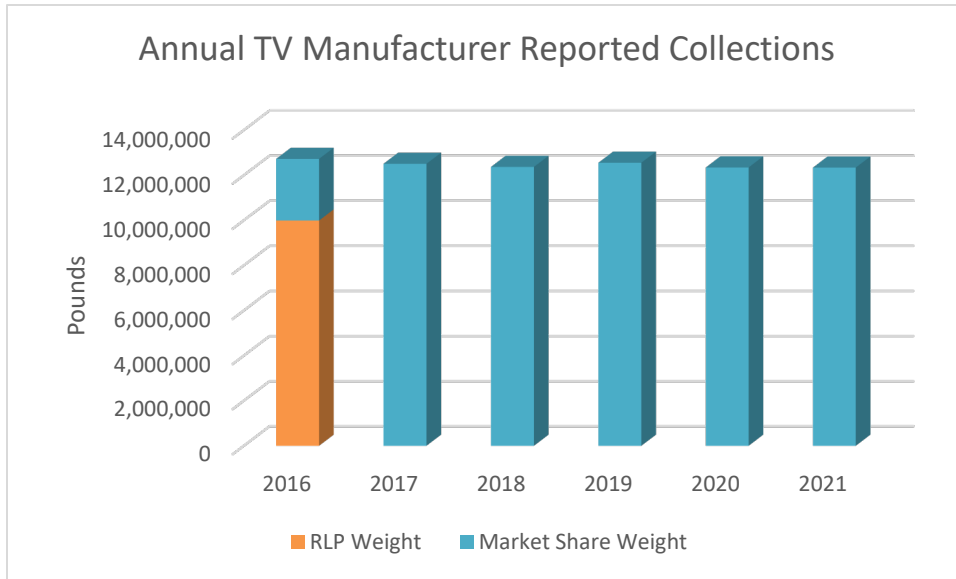
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<sup>1</sup> Available at [Pike Research: Materials Footprint Reduction of Televisions and Computer Monitors](#).

manufacturers chose to participate in an RLP. However, as market share requirements continue to grow in the future, TCEQ believes the Recycling Leadership Program will prove to be a valuable alternative for compliance under the rule and statute.

Chart 3 shows the weight of television equipment reported as being collected by manufacturers.

**Chart 3. Annual TV Manufacturer Reported Collections**



Appendix 2 lists data reported by each manufacturer. The numbers reflect amounts sold and collected in calendar year 2021. Additionally, the individual market shares are provided. This data was submitted by manufacturers through February 2022. At the time of this report, 21 manufacturers representing 36 brands have submitted complete 2021 reports. 20 manufacturers submitted registration for their 2022 programs and one manufacturer submitted a new registration. One additional manufacturer representing one brand satisfied program requirements by participating in the Texas Recycles Computers program.

## Registered TV Recyclers

Beginning Jan. 31, 2014, television recyclers were required to report the total weight or volume of TVs received, recycled, and disposed of in the preceding calendar year (CY). In CY 2021, Texas TV recyclers received approximately 16.3 million pounds, recycled 15.8 million pounds, and disposed of zero pounds of television equipment. Additionally, one television recycler noted 3,466 pounds of wood casing was

generated from projection TV manual breakdown, and was not further recycled by the recycler.

### Appendix 1- 2021 Computer Manufacturers' Reported Amounts

<b>Manufacturer Name</b>	<b>Brand Name(s)</b>	<b>Weight Collected (lbs)</b>	<b>Weight Recycled (lbs)</b>	<b>Weight Reused (lbs)</b>
@Xi Computer Corp	@Xi Computer Xi Computer	0	0	0
Acer America Corporation	Acer View AOPEN Aspire eMachines Gateway GrandPad	500,361.0	500,361.0	0.0
Advanced PC Products Inc	Advanced PC Advanced PC Quasar	50.0	50.0	0.0
Altex Electronics Ltd	Altex Electronics	48,270.0	48,270.0	0.0
Amazon Fulfillment Services Inc	Kindle Fire	82,133.0	72,033.0	10,100.0
Apple Inc	Apple Next	22,179.8	22,179.8	0.0
ASUS Computer International	ASUS	283.0	283.0	0.0
Avinext	Avinext MicroAge SuperMicro	2,358.0	2,358.0	0.0
Azpen Innovation Inc	Azpen	16.0	0.0	16.0
Barnes & Noble	Barnes & Noble NOOK by Barnes & Noble	3.0	3.0	0.0
Bass Computers	Bass Computers, Inc.	0.0	0.0	0.0
BenQ American Corp	BenQ	19.0	19.0	0.0
Computer Shak Inc	Computer Shak, Inc.	8,000.0	6,000.0	2,000.0
CTL Inc	CTL	0.0	0.0	0.0
Curtis International Ltd	Klu Proscan	0.0	0.0	0.0
Cyberpower Inc	Cyberpower	0.0	0.0	0.0



<b>Manufacturer Name</b>	<b>Brand Name(s)</b>	<b>Weight Collected (lbs)</b>	<b>Weight Recycled (lbs)</b>	<b>Weight Reused (lbs)</b>
Dell Inc	Alienware Dell Wyse	2,390,701.0	2,390,701.0	0.0
DP Audio	Core Innovations	0.0	0.0	0.0
DPI Inc	Zeki	0.0	0.0	0.0
Durabook Americas	Durabook	0.0	0.0	0.0
Dynabook Americas Inc	dynabook Portege dynabook TECRA Toshiba	12.0	12.0	0.0
ECP Computers & More	ECP Computers	0.0	0.0	0.0
Element TV Company LP	Element	0.0	0.0	0.0
Elo Touch Solutions Inc	Elo	0.0	0.0	0.0
Envision Peripherals Inc	AOC	0.0	0.0	0.0
Equus Computer Systems Inc	Mirus Nobilis Nobleview VitaMobility	0.0	0.0	0.0
Facebook Technologies LLC	Portal	0.0	0.0	0.0
Fujitsu Computers Systems Corporation	Fujitsu Fujitsu-Siemens	6.0	6.0	0.0
Google Inc	Chromebook Pixel Google Chromebook Pixel C Tablet Project Tango Tablet	130.0	130.0	0.0
Hewlett Packard Company	Apollo Computer Compaq Digital Equipment Corporation (DEC) Hewlet-Packard VooDoo PC	2,800,056.0	2,800,056.0	0.0
Hyundai Technology Group Inc	Hyundai Technology	0.0	0.0	0.0
iBoss Inc (Phantom Technologies)	iBoss	0.0	0.0	0.0
iBuyPower	iBuyPower	0.0	0.0	0.0
Ingram Micro (V7)	V7	0.0	0.0	0.0

<b>Manufacturer Name</b>	<b>Brand Name(s)</b>	<b>Weight Collected (lbs)</b>	<b>Weight Recycled (lbs)</b>	<b>Weight Reused (lbs)</b>
Intel	Intel Compute Stick Intel NUC	0.0	0.0	0.0
International Business Machines	IBM	0.0	0.0	0.0
International Products Sourcing Group	Powerspec Winbook	10,360.0	10,360.0	0.0
Kidz Delight Ltd	Kurio	850.0	850.0	0.0
Komputer + Peripherals Inc	Komputer+	1,522.0	1,022.0	500.0
Lenovo (United States) Inc	Lenovo Medion	295.0	295.0	0.0
LG Electronics USA Inc	Goldstar LG Zenith	193,110.0	193,110.0	0.0
LINSAY	LINSAY	10.0	0.0	4.0
Maverick Computer Services	Maverick Computer Services	0.0	0.0	0.0
Microsoft Corporation	Microsoft Nokia	26.0	26.0	0.0
Motorola Mobility LLC	Motorola	0.0	0.0	0.0
MSI Computer Corp	MSI	7.0	7.0	0.0
Naxa Electronics	Naxa	0.0	0.0	0.0
NEC Display Solutions of America Inc	NEC NEC AccuSync NEC MultiSync	0.0	0.0	0.0
NVIDIA Corp	Shield Portable Shield Tablet	0.0	0.0	0.0
OnePlus	OnePlus	0.0	0.0	0.0
Oracle	Oracle MICROS Sun	148,581.0	140,112.0	7,429.0
Panasonic Corp of North America	Panasonic	7.0	7.0	0.0
PC & Cable	PC & Cable	2,537.0	2,537.0	0.0
Planar Systems Inc	Planar	0.0	0.0	0.0
Razer	Razer	0.0	0.0	0.0
Russell Distribution Company LLC	EPIK EVOO	0.0	0.0	0.0

<b>Manufacturer Name</b>	<b>Brand Name(s)</b>	<b>Weight Collected (lbs)</b>	<b>Weight Recycled (lbs)</b>	<b>Weight Reused (lbs)</b>
Samsung Electronics Co	Samsung Samsung Galaxy Tab 4 Nook Samtron Syncmaster	1,751.0	1,751.0	0.0
SCEPTRE Inc	SCEPTRE	130.0	130.0	0.0
Seneca Data Distributors	Nexlink	0.0	0.0	0.0
Shuttle Computer Group Inc	Shuttle Computer Group Inc	0.0	0.0	0.0
TCT Mobile (US) Inc	Alcatel Alcatel One Touch TCL	3.0	3.0	0.0
Tongfang Global Inc	Westinghouse	0.0	0.0	0.0
Trans Cosmos America Inc	VAIO	0.0	0.0	0.0
ViewSonic Corporation	Cybervision Optiquet Utobia ViewSonic	476.0	476.0	0.0
Vtech Electronics North America LLC	LeapFrog Vtech	4.0	4.0	0.0
Wacom Technology Inc	Wacom	0.0	0.0	0.0
Walmart Inc	Motile Onn	0.0	0.0	0.0
Westgate Computers	Westgate Computers	3,480.0	2,840.0	640.0
Wintec Industries Inc	FileMate	0.0	0.0	0.0

## Appendix 2- 2021 TV Manufacturers' Reported Amounts and 2022 Market Share

<b>Manufacturer</b>	<b>Brands</b>	<b>Sold (lbs)</b>	<b>Collected (lbs)</b>	<b>Recycled (lbs)</b>	<b>Reused (lbs)</b>	<b>Market Share (lbs) Assigned for 2022</b>
Best Buy	Insignia, Pioneer, Toshiba	97,869,808	1,182,486	1,182,486	0	750,033
Curtis International	ProScan, RCA, Scenium, Sylvania	711,148	15,372	15,372	0	9,662
DPI Inc.	GPX, iLive, Memorex, WeatherX	8,926*	1,123	1,123	0	1,215
Element TV Company	Element	8,754,282	204,920	204,920	0	78,851
EliteLux Technologies	Sansui	863,102	3,100	3,100	0	5,662
Funai Corp.	Magnavox, Phillips, Sanyo	18,321,237	435,322	435,322	0	266,311
Hisense USA	Hisense	117,568,986	798,594	798,594	0	1,021,406
Hitachi America Ltd. **	Hitachi	0	32,181	32,181	0	16,911
JVC Americas	JVC	4,574,729	27,490	27,490	0	59,742
LG Electronics	LG, Zenith, Goldstar, LG Signature	261,959,429	1,933,013	1,933,013	0	2,052,310
Naxa Electronics, Inc.	Naxa	186*	49	49	0	35
Peerless Industries	Peerless-AV	2,315*	301	301	0	278
PLR IP Holdings	Polaroid	0	11,001	11,001	0	0
Samsung Electronics	Samsung	403,907,815	4,386,308	4,386,308	0	4,723,416

<b>Manufacturer</b>	<b>Brands</b>	<b>Sold (lbs)</b>	<b>Collected (lbs)</b>	<b>Recycled (lbs)</b>	<b>Reused (lbs)</b>	<b>Market Share (lbs) Assigned for 2022</b>
Sceptre Inc.	Komodo, oCosmo, Sceptre,	1,820,310	27,310	27,310	0	23,187
Sony Electronics	Sony	83,857,399	499,924	499,924	0	661,786
Sunbrite TV	Sunbrite TV	668,654*	13,728	13,728	0	14,357
TongFang Global, Inc	Westinghouse	4,627,283	30,109	30,109	0	122,598
TTE Technology	TCL	***	1,359,013	1,359,013	0	***
VIZIO Inc.	VIZIO	***	1,374,292	1,374,292	0	***
Walmart Inc.	Onn	9,725,546*	0	0	0	111,308

\*In accordance with [30 TAC, §328.171](#)<sup>2</sup>, manufacturers may report weight sold in Texas or nationally. This manufacturer reported weight sold in Texas.

\*\*Did not report television equipment sales in Texas, has ceased production of covered television equipment, and has opted not to remain in the program.

\*\*\*Some manufacturers have marked their sales data as confidential and proprietary, in accordance with [30 TAC §328.189](#)<sup>3</sup>.

## 2021 TV Manufacturers Participating under the Texas Recycles Computers Program

<b>Manufacturer</b>	<b>Brands</b>
Viewsonic Corporation	Viewsonic

<sup>2</sup> Available at [30 TAC, §328.171](#)

<sup>3</sup> Available at [30 TAC, §328.189](#)