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March 2016  
SFR-99/15

# Program Report on Texas Recycles Computers and Texas Recycles Televisions



# **Program Report on Texas Recycles Computers and Texas Recycles Televisions**

Prepared by  
Environmental Assistance Division

SFR-99/15

March 1, 2016

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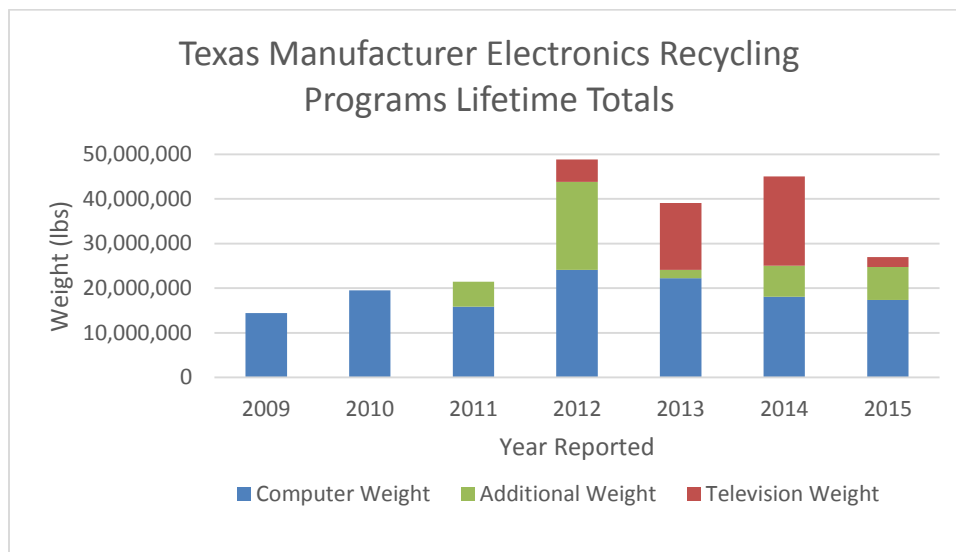
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# Results from Manufacturers' Annual Reports

The Texas Recycles Computers and Texas Recycles TVs programs have been active for several years now and together have resulted in 173,791,682\* lbs. of computers and televisions being collected, with 164,420,809 lbs. of this being recycled and 133,454 lbs. being reused. Computer manufacturers also collected an additional 41,670,009 lbs. of additional weight over the lifetime of the program, bringing the total weight of electronics collected to 215,461,691\* lbs. For the 2015 calendar year, the programs collected a total of 27,003,181\* lbs.; with 17,347,738 lbs. of computers, 7,428,180 lbs. of additional electronic equipment, and 2,227,263\* lbs. 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**



*\*The television weight collected in 2015 will increase when manufacturers participating in the MRLP recycling leadership program report next year. Television weight shown represents manufacturers who participated under the market share option and submitted their reports before the completion of this report.*

## Texas Recycles Computers Program

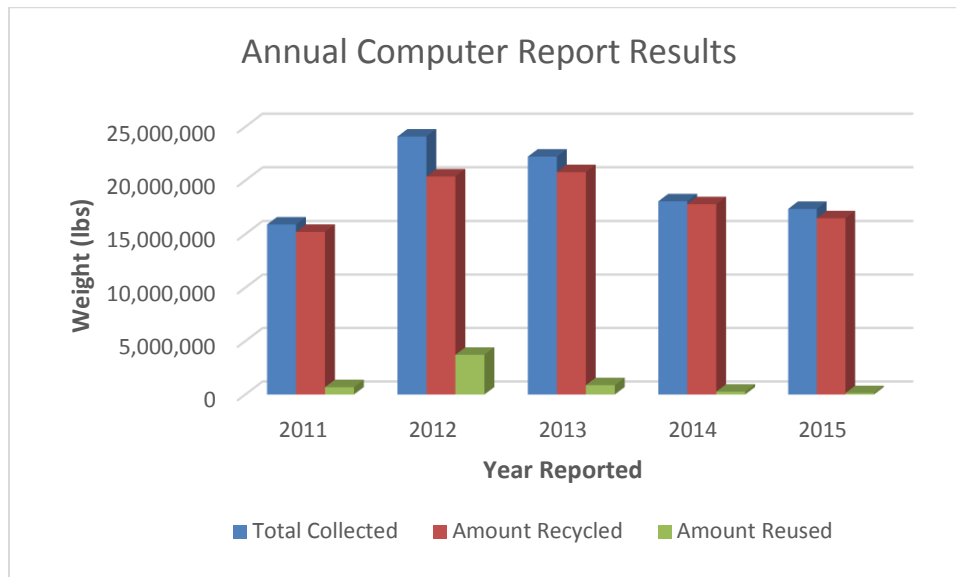
In reporting year 2015, the total combined weight of computer equipment collected was 17,347,738 lbs. The total amount recycled was 16,475,708 lbs. and the total amount reused was 127,614 lbs. Comparatively, the total weight of computer equipment collected in 2014 was 18,055,627 pounds. Of that collected weight, 17,789,409 pounds were recycled and 266,025 pounds were reused.

In addition to recycling covered computer equipment, many computer manufacturers also voluntarily collect televisions and other electronics for recycling. The TCEQ allows computer manufacturers to report other electronics collected, not just the computer equipment covered under the program. For 2015, manufacturers reported collecting 7,428,180 lbs. of additional non-covered electronics. The number was higher than 2014 voluntary collection amounts of 6,989,462 pounds. The voluntarily

reported numbers that included televisions reported under the Texas Recycles TVs program were excluded.

Historical data for the most current 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 the TCEQ, the agency's reported number does not fully represent 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 for a manufacturer to report collecting no computer equipment is because 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 recent surge in manufacturers entering the tablet market, relatively new manufacturers' products have not reached their end of useful life and been returned for recycling.

As discussed in previous years, with the rapid advancement of technology, electronics continue to become lighter and more compact. We have proposed that this trend could lead to manufacturers reporting lower total weight of materials collected. A report published in July 2011 on behalf of the



Consumer Electronics Association (CEA) detailed this manufacturing trend between 2004 and 2010 from cathode ray tubes (CRT) to lighter flat panel technology for televisions and computer monitors.<sup>1</sup>

*Appendix 1* lists amounts reported by each manufacturer for the 2015 calendar year. Some numbers reported by manufacturers as recycled or reused may have been collected in a previous year.

### Texas Recycles TVs Program

2014 was the second year that TV manufacturers were required to establish a recycling program and the first year that individual manufacturers were required to collect their market share allocation.

Participating manufacturers reported collecting 20,033,910 pounds of TVs. The TCEQ calculated the state recycling rate and market share for manufacturers participating individually. The state recycling rate was determined to be 9.5 percent. The market share for each affected manufacturer was determined by multiplying a manufacturer's reported weight in sales for calendar year 2013 by the recycling rate. For manufacturers that reported their sales weight nationally, census data was used to calculate the percentage of their sales for the state of Texas. Manufacturers were provided their market share; and those market shares are reported in *Appendix 2, Table 1*. Manufacturers were required to collect at least this amount in 2015. Several manufacturers failed to meet their allocated market share, citing issues with their recycler or lack of consumer participation in the company recycling takeback plan. After a period of compliance assistance these manufacturers either changed their recycler, or decided to join an active recycling leadership program to ensure their future standing in the program.

As part of the program, TV manufacturers that participated in the program as individuals collected 1,844,264 pounds of TVs in 2014. Of that, 1,841,802 pounds were recycled and 2,462 pounds were reused.

At the time that this report was completed the TCEQ had received reports from the majority of manufacturers, but a small number failed to report as can be seen in *Appendix 2, Table 2*. In 2016, 24 manufacturers representing 38 brands submitted complete registrations by the time this report was submitted. An additional two manufacturers representing four brands satisfied their program requirements by participating through the Texas Recycles Computers program.

The TCEQ calculated the state recycling rate and market share for manufacturers participating individually. The state recycling rate was determined to be 6.8%, a reduction from the previous year due in part to an increase in weight sold by manufacturers. Manufacturers were provided their market share by Dec. 1, 2015. The individual market shares are reported in *Appendix 2, Table 2*. Manufacturers will be required to collect at least this much in 2016.

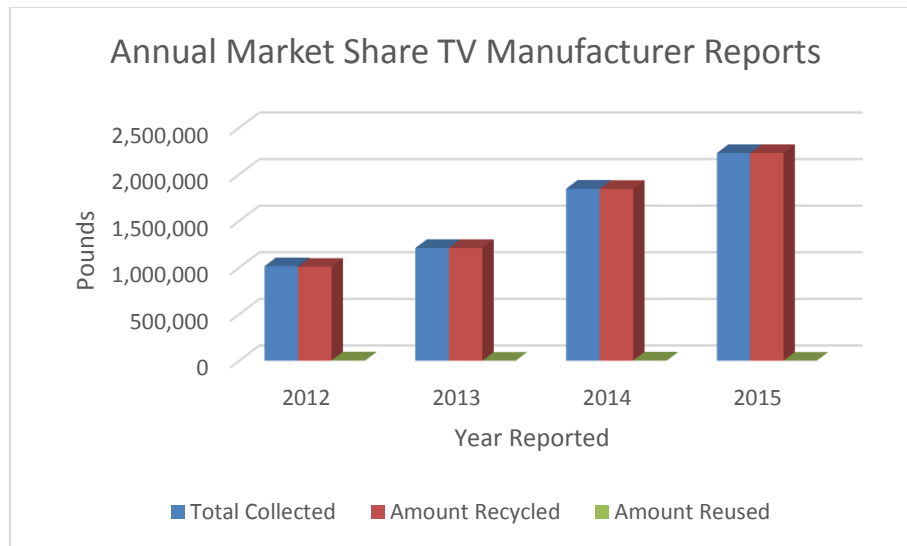
The weight of TVs reported as having been collected in 2015 by manufacturers that participated in the program as individuals was 2,227,263. Of that collected weight, 2,227,263 pounds was recycled and 0 pounds was reused.

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

Chart 3 shows the weights reported as being collected by manufacturers that chose to participate under the market share options since the first reporting year in 2012.

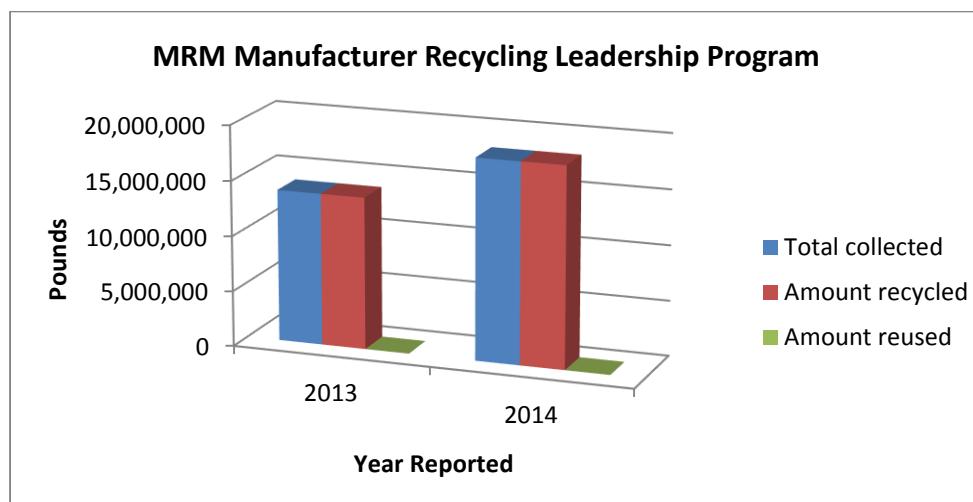
**Chart 3. Annual Market Share TV Manufacturer Reports**



In 2014, there were two recycling leadership programs. Fourteen manufacturers participated with the MRM Manufacturer RLP. Four manufacturers participated in the MITS RLP. The MITS RLP failed to meet the RLP requirements and ended after its first year of operation. January 2015 was the first time that RLPs were required to submit their Collection Reports.

The MRM Manufacturer RLP submitted their first required biennial report at the beginning of 2015 with recycling information provided for the two years they had been in operation, 2013 and 2014. The manufacturers participating in the MRM Manufacturer RLP recycled 13,741,019 pounds in 2013 and 18,189,646 pounds in 2014. This information is shown graphically in *Chart 4*.

**Chart 4. MRM Manufacturer Recycling Leadership Program**



*Appendix 2* lists data reported by each manufacturer in the 2015 and 2016 reports. The reports reflect amounts sold and collected in calendar year 2014 with *Table 1* and 2015 with *Table 2*. The tables also indicates how the manufacturer chose to participate in the program in 2015 and 2016. This data was submitted by manufacturers through February 2016. Due to the short duration between the manufacturers report deadline of January 31 and the Legislative Report deadline of March 1, limited quality assurance and analysis of the 2016 data has been completed.

## Registered TV Recyclers

Beginning January 31, 2014, television (TV) recyclers were required to report the total weight or volume of TVs received, recycled, and disposed of in the preceding calendar year (CY) on an annual basis. In CY 2013 (January 1, 2013- December 31, 2013), Texas TV recyclers received approximately 22 million pounds, recycled 21 million pounds, and disposed of 4,300 pounds of covered television equipment.

In CY 2014 (January 1, 2014- December 31, 2014), approximately 24.3 million pounds were received, 23 million pounds were recycled, and zero pounds were disposed of, as reported by 15 active TV recyclers.

## Appendix 1- 2015 Computer Manufacturers' Reported Amounts

<i>Manufacturer Name</i>	<i>Brand Name(s)</i>	<i>Collected (lbs)</i>	<i>Recycled (lbs)</i>	<i>Reused (lbs)</i>
@Xi Computer Corp	Xi Computer, @Xi Computer	0	0	0
Acer America Corporation	Acer, Acer View, Aspire, eMachines, Gateway	904,190.6	904,190.6	0
Advanced PC Products, Inc.	Advanced PC, Advanced PC Quasar	50	50	0
AG Neovo Technology Corporation	Ag Neovo	0	0	0
Altex Electronics Ltd.	Altex Electronics	50,020	50,020	0
Amazon Fulfillment Services, Inc.	Kindle Fire	22,270	212	13,163
Apple Inc.	Apple, Next	2,696,721	2,696,721	0
ASUS Computer International	ASUS	11	11	0
Avinext	Avinext, MicroAge, SuperMicro	5,998	5,998	0
Azpen Innovation, Inc.	Azpen	470	0	470
Barnes & Noble	Barnes & Noble (NOOK)	5	0	0
Bass Computers, Inc.	Bass Computers	282	282	0
BenQ American Corporation	Ben Q	0	0	0
Best Buy	Dynex, Insignia	696,487	604,903	91,584
Bits technical Corporation	Bits Technical Corporation	85	85	0
Cellco Partnership	Verizon Ellipsis	20,507	67	20,440

<b>Manufacturer Name</b>	<b>Brand Name(s)</b>	<b>Collected (lbs)</b>	<b>Recycled (lbs)</b>	<b>Reused (lbs)</b>
Computer Shak, Inc.	Computer Shak, Inc.	5,000	4,000	500
Craig Electronics, Inc.	Craig	0	0	0
Curtis International, Ltd.	Klu, Proscan	0	0	0
Cyberpower, Inc.	Cyberpower	0	0	0
David Anderson Consulting	David Anderson Consulting	400	400	0
Dell Inc.	Alienware, Dell	4,345,947	3,611,947	0
Double Power Tech	DOPO, Nobis			
DoubleSight Displays	Doublesight	37	37	0
DPI, Inc.	Zeki	0	0	0
ECP Computer & More	ECP Computers			
Elo Touch Solutions, Inc.	Elo	0	0	0
eMatic	eMatic	6.7	0	6.7
Envision Peripherals, Inc.	AOC, Envision	0	0	0
Equus Computer Systems Inc.	Mirus, Nobileview, Nobilis, Vitamobility	0	0	0
Fuhu, Inc.	Nabi	0	0	0
Fujitsu Computer Systems Corporation	Fujitsu, Fujitsu-Siemens	0	0	0
Gammatech Computer Corporation	Durabook, Slimnote	0	0	0
Google, Inc.	Chromebook	0	0	0
Hannspre	Hanns-G, Hannspre, I-Inc			
Hewlett Packard Company	Apollo Computer, Compaq, Digital Equipment Corp (DEC), Hewlett-Packard, VooDoo PC	4,552,956	4,552,956	0
Hisense USA	Hisense	0	0	0
Howard technology Solutions	Howard	0	0	0
HTC Corporation	HTC	0	0	0
HUAWEI DEVICE USA, INC.	Huawei	0	0	0
Hyundai IT America Corp	Hyundai, Hyundai Imagequest	0	0	0
iBoss, Inc.	Phantom Technologies (iBoss)	0	0	0
iBuyPower	iBuyPower	0	0	0
Infotel distributors, Inc.	Systemax, Ultra	0	0	0
Ingram Micro	V7	0	0	0
International Business Machines	IBM	0	0	0
International Products Sourcing Group	Powerspec, Winbook	29,218	28,218	0
Kidz Delight Ltd	Kurio	0	0	0
Komputer + Peripherals, Inc.	Komputer +	8,122	8,122	0
LeapFrog Enterprises, Inc.	Leapfrog	3	3	0
Lenovo (United States) Inc.	Lenovo, Medion	11	11	0
LG Electronics USA, Inc.	Goldstar, LG, Zenith	1,440,000	1,440,000	0
LINSAY	LINSAY	0	0	0

<b>Manufacturer Name</b>	<b>Brand Name(s)</b>	<b>Collected (lbs)</b>	<b>Recycled (lbs)</b>	<b>Reused (lbs)</b>
M&A Technology	M&A Technology, Manda	37,565	37,565	0
Maverick Computer Services	Maverick Computer Services	0	0	20.13
Michley Tivax	Michley, Michley Tivax, Mi-Traveler, Tivax	18	12	6
Microsoft Corporation	Microsoft (Surface)	778.3	24.2	754.1
Midwest Trading Group	CrystalView, Soundlogic	0	0	0
Motorola Mobility LLC	Motorola	0	0	0
MSI Computer Corp.	MSI	0	0	0
Naxa Electronics	Naxa	1,193	1,193	0
NEC Display Solution of America, Inc.	NEC, NEC AccuSync, NEC MultiSync	800	800	0
Nixeus Technology, Inc.	Nixeus	30	0	30
NVIDIA Corp.	ShieldPortable, Shield Tablet	0	0	0
Oracle	Sun	0	0	0
Panasonic Corp of North America	Panasonic	0	0	0
Paxson Enterprises, Inc.	Paxson Enterprises, Inc.	0	0	0
PC & Cable	PC & Cable	0	0	0
Planar Systems, Inc.	Planar	0	0	0
PLR IP Holdings, LLC	Polaroid	2,000	2,000	0
Premio, Inc.	Premio	0	0	0
Procom Products	D2 Pad			
RCS Technologies, Inc.	RCS Technologies	287	47	240
Rullingnet Corp	Vinci	36	0	0
Samsung Electronics Co.	Samsung, Galaxy Tab 4 Nook, Samtron, Syncmaster	2,143,726	2,143,726	0
Seneca Data	Nexlink	0	0	0
Shuttle Computer Group, Inc.	Shuttle Computer Group, Inc.	0	0	0
Sony Electronics, Inc.	Sony	375,000	375,000	0
TCT Mobile	Alcatel OneTouch	0	0	0
TMAX Digital	Apex, NuVision, TMAX	0	0	0
Toshiba America Information Systems, Inc.	Toshiba	20	20	0
Trans Cosmos America, Inc.	VAIO	0	0	0
University Computer Stores	University Computer Store	0	0	0
Velocity Micro, Inc.	Velocity Micro	0	0	0
VideoTex	VideoTex Systems	0	0	0
Viewsonic Corporation	Cybervision, Nokia, Optique, Utobia, Viewsonic	0	0	0
Visual Land, Inc.	Visual Land	0	0	0
Vizio, Inc.	Vizio	0	0	0
Vox International Corp.	RCA	0	0	0

<b>Manufacturer Name</b>	<b>Brand Name(s)</b>	<b>Collected (lbs)</b>	<b>Recycled (lbs)</b>	<b>Reused (lbs)</b>
Vtech Electronics North America LLC	Vtech	0	0	0
Wacom Technology, Inc.	Wacom	0	0	0
Wakstar, LLC	Wakstar	2,599	2,599	0
Westgate Computers	Westgate Computers	1,225	1,100	125
Wintec Industries, Inc.	Filemate	0	0	0
Workhorse Computers	Workhorse	93	93	0
YIFANG USA, INC.	Nextbook	0	0	0
Zydeco Computer Technologies	Zydeco Technologies	3,570	3,295	275
Zingarr	AARP RealPad	0	0	0

## Appendix 2- 2014 and 2015 TV Manufacturers' Reported Amounts

**Table 1.** 2014 Manufacturers' Reported Amounts and Market Share Allocations

### 2015 Market Share Participants

<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 2015</b>
Bang & Olufsen America, Inc.	Bang & Olufsen	4,580	337	337	0	557
Bose Corporation**	VideoWave	10,343	N/A	N/A	N/A	N/A
Curtis International Ltd	Curtis, ProScan	764,436	0	0	0	6,322
DPI, Inc.	GPX, iLive, WeatherX	34,590	1,511	1511	0	5,030
Hisense USA***	Hisense	N/A	163,165	163,165	0	143,778
Innovative DTV Solutions***	RCA (22" and smaller)	N/A	258	258	0	*
Naxa Electronics, Inc.	Clear Tunes, NAXA	1,486	144	144	0	152
ON Corp US, Inc.	RCA (19" and larger)	*	127,571	127,571	0	*
Sceptre, Inc.	Ocosmo, Sceptre	121,762	6,349	6,349	0	11,567
Sony Electronics, Inc.	Sony	5,244,060	876,400	876,400	0	268,462
Star Light Electronics Co., Ltd.	Crosley	69,177	0	0	0	0

<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 2015</b>
Sunbrite TV, LLC***	Sunbrite TV Marquee, Sunbrite TV Pro Series, Sunbrite TV Signature Series	62,615	2,596	134	2,462	N/A
TMAX Digital, Inc.	Apex, Apex Digital	25,099	40,960	40,960	0	40,960
Upstar USA Group	Upstar	815	0	0	0	77
Venturer Electronics Inc.**	Venturer	N/A	N/A	N/A	N/A	N/A
VIZIO, Inc.	VIZIO	*	788,394	788,394	0	*

\*Some manufacturers have marked their sales data as confidential and proprietary, in accordance with [§328.189](#)<sup>2</sup>

Fields marked N/A are the result of a manufacturer dropping out of the television market\*\* or joining a recycling leadership program in 2015\*\*\*.

### 2015 RLP Participants (MRM)

<b>Manufacturer</b>	<b>Brands</b>
Best Buy	Dynex, Insignia
Funai	Emerson, Funai, Magnavox, Phillips
Hitachi America, Ltd.	Hitachi
JVC	JVC
Kontech USA, LLC	Changhong
LG Electronics USA, Inc.	GoldStar, LG, Zenith
Orion America, Inc.	Orion, Sansui
Panasonic Corporation of North America	Panasonic, Quasar, SANYO
PLR IP Holdings, LLC	Polaroid
Samsung Electronics America, Inc.	Samsung
Sharp Electronics Corporation	Aquos, Sharp
Toshiba America Information Systems, Inc.	Toshiba
TTE Technology, Inc.	TCL

<sup>2</sup> Available at < [30 TAC, RULE §328.189](#) >.

<b>Manufacturer</b>	<b>Brands</b>
Vox International Corporation	Audiovox

### 2015 RLP Participants (MITS)

<b>Manufacturer</b>	<b>Brands</b>
Craig Electronics	Craig
Haier America	Haier
Tongfang Global	Seiki Digital, Element Electronics
Westinghouse**	Westinghouse

### 2015 TV Manufacturers Complying under the Texas Recycles Computers (TRC) Program

<b>Manufacturer</b>	<b>Brands</b>
NEC Display Solutions of America, Inc.	NEC, NEC AccuSync, NEC MultiSync,
Viewsonic Corporation	Viewsonic

**Table 2.** 2015 Manufacturers' Reported Amounts and Market Share Allocations

### 2016 Market Share Participants

<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 2016</b>
Bang & Olufsen America, Inc.	Bang & Olufsen	4,670	557	557	0	435
Changhong	Changhong	3,840	0	0	0	3,840
Craig Electronics	Craig	9,754	1,096	1,096	0	887
Curtis International Ltd	Curtis, ProScan	94,777	6,322	6,322	0	6,140
DPI, Inc.	GPX, iLive, WeatherX	45,652	5,030	5,030	0	3,286
Haier America	Haier					43,430
Naxa Electronics, Inc.	NAXA	191	191	152	152	141,
ON Corp US, Inc.	RCA (19" and larger)					*
Sceptre, Inc.	Ocosmo, Sceptre	105,926	11,742	11,742	0	11,689
Sony Electronics, Inc.	Sony	5,674,012	875,000	875,000	0	503,424
Star Light Electronics Co., Ltd.	Crosley	0	0	0	0	374
TMAX Digital, Inc.	Apex,					2,409



<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 2016</b>
	Apex Digital					
Tongfang Global	Seiki, Element, Westinghouse					531,718
Upstar USA Group	Upstar					766
VIZIO, Inc.	VIZIO	*	1,327,364	1,327,364	0	*

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

### 2016 RLP Participants (MRM)

<b>Manufacturer</b>	<b>Brands</b>
Best Buy	Dynex, Insignia
Funai	Emerson, Funai, Magnavox, Phillips
Hisense	Hisense, Sharp
Hitachi America, Ltd.	Hitachi
Innovative DTV	RCA- 22" and under
JVC	JVC
LG Electronics USA, Inc.	GoldStar, LG, Zenith
Panasonic Corporation of North America	Panasonic, Quasar
PLR IP Holdings, LLC	Polaroid
Samsung Electronics America, Inc.	Samsung
SSNA, Inc. (Formerly Orion)	Orion, Sansui, Contex, Saikyo
Sunbrite TV	Sunbrite TV
TTE Technology, Inc.	TCL
Vox International Corporation	Audiovox

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

**2016 TV Manufacturers Complying under the Texas Recycles Computers (TRC) Program**

<b><i>Manufacturer</i></b>	<b><i>Brands</i></b>
NEC Display Solutions of America, Inc.	NEC, NEC AccuSync, NEC MultiSync,
Viewsonic Corporation	Viewsonic