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Conservation

NYS Electronic Equipment Recycling and Reuse Act

Achievements and Challenges

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Background

- NYS Electronic Equipment Recycling and Reuse Act – passed 5/28/2010
- Progressive State E-waste Law
- Broad range of covered electronic equipment
- Broad range of consumers
- Comprehensive convenience standards & performance goals & environmental standards

Goals and Objectives of the Act

- Waste stream diversion & resource conservation
- Shift to shared responsibility
- Increase e-waste recycling & reuse
- Develop & implement a streamlined e-waste management program
- Enhance recycling/reuse infrastructure

Covered Electronic Equipment

- **Computers**
(including laptops, desktops, tablets and e-readers)
- **Computer Peripherals**
 - Monitors
 - Electronic Keyboards
 - Electronic Mice or Similar Pointing Devices
 - Facsimile Machines
 - Document Scanners
 - Printers
- **Televisions**
- **Small Electronic Equipment**
 - VCRs
 - Digital Video Recorders
 - Portable Digital Music Players
 - DVD Players
 - Digital Converter Boxes
 - Cable or Satellite Receivers (including digital media receivers)
 - Electronic or Video Game Consoles
- **Small Scale Servers**



Stakeholders

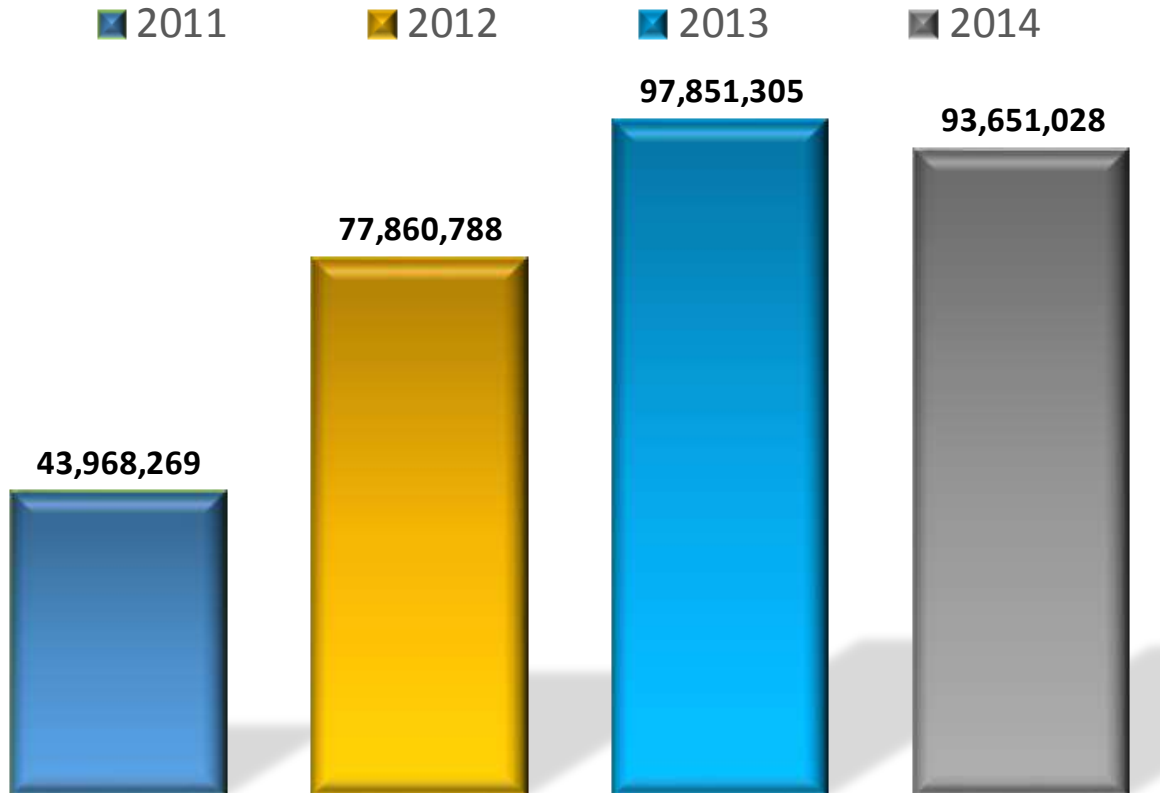
- Manufacturers
- Collective Organizations
- Recycling Facilities
- Consolidation Facilities
- Collection Sites (private and municipal)
- Retailers
- Waste Haulers/Transporters
- Waste Management Facilities
- Consumers
- NYSDEC



Calculating the Statewide Goal

- First three program years set out in the Act:
 - 2011 – 3 lbs. per capita
 - 2012 – 4 lbs. per capita
 - 2013 – 5 lbs. per capita
- For 2014 onward, the statewide goal will be determined by multiplying the “base weight” times the “goal attainment percentage”

Statewide E-waste Recycling/Reuse Goal



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Manufacturer's Acceptance Standard

(Example Calculation)

Manufacturer's
Market Share
of E-waste =

Total weight of manufacturer's CEE sold in the state
based on the average annual retail sales during the
preceding 3 calendar years

$$= \frac{100,000 \text{ lbs.}}{1,000,000 \text{ lbs.}} = 10\%$$

Total weight of **all** manufacturer's CEE sold in the state
based on the average annual retail sales during the
preceding 3 calendar years

Manufacturer's
Acceptance
Standard =

Statewide
Recycling or Reuse
Goal X

Manufacturer's
Market Share
of E-waste

$$= 93,651,028 \times 10\% =$$

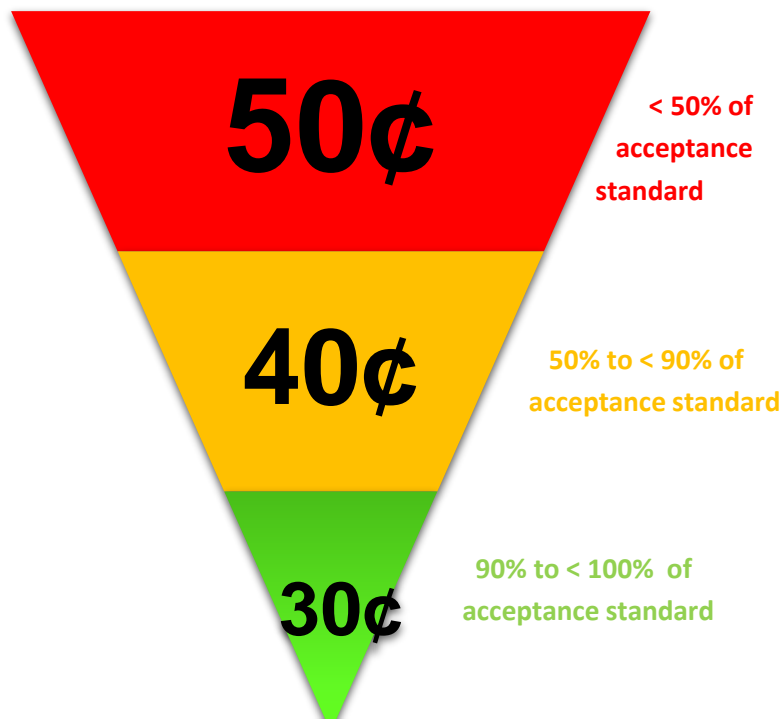
9.4
million lbs.



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Recycling Surcharges and Credits

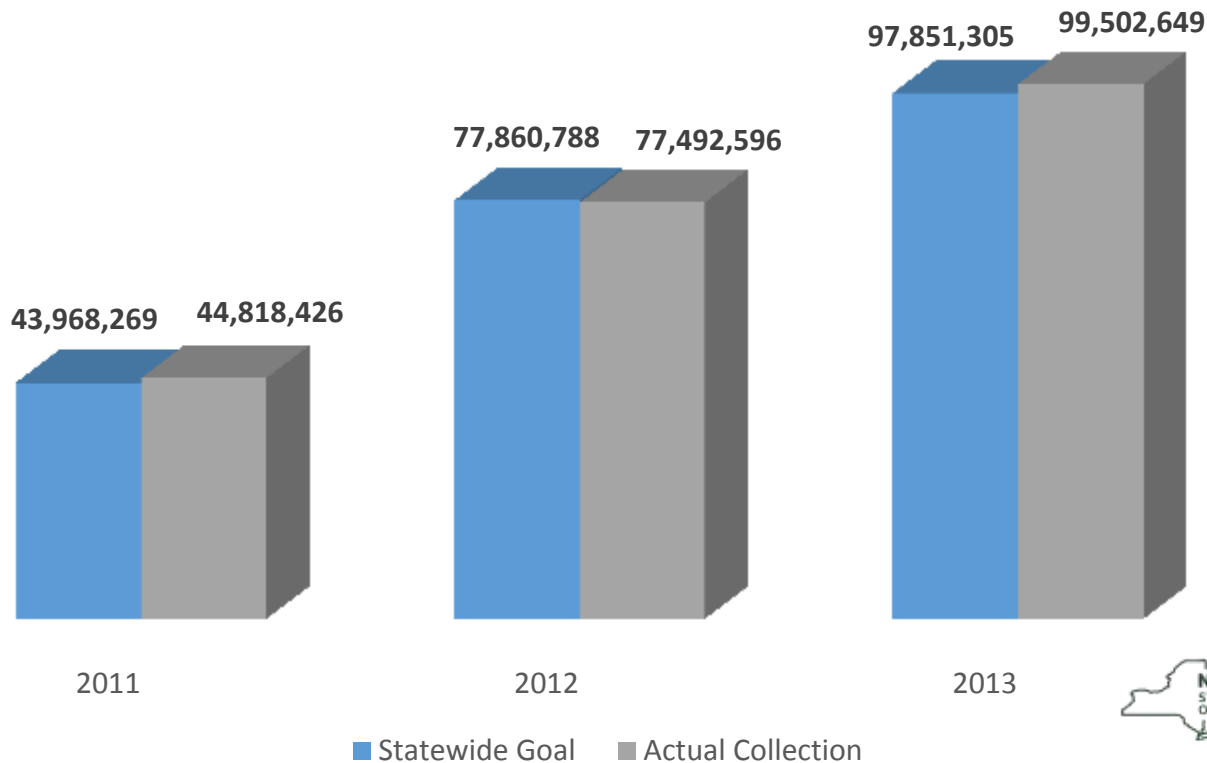
Multiplied by the number of additional lbs. that should have been collected



If a manufacturer accepts more than its acceptance standard, the excess weight may be used as electronic waste acceptance credits.

Program Performance (2011-2013)

Statewide Goal vs. Actual Collection



Recycling Surcharges (2012 & 2013)

Recycling Surcharges		
Program Year	<u>2012</u>	<u>2013</u>
Manufacturers	10	9
Pounds under-collected	90,512	466,461
Surcharges issued	\$ 41,922.30	\$ 176,536.50
Surcharges paid	\$ 41,922.30	\$ 176,536.50



Program Achievements

- Recycling rate increases in each program year:
 - 2011 – 2.3 lbs. per capita
 - 2012 – 4 lbs. per capita
 - 2013 – 5 lbs. per capita
- Total collected from 2011-2013: **221,813,671 lbs.**
- Enhanced recycling/reuse infrastructure throughout the state

Fees and Surcharges Received

2011 Calendar Year:

○ Registration Fees	<u>\$297,000</u>
Total:	\$297,000

2012 Calendar Year:

○ Registration Fees	\$29,000
○ Mfr. Annual Report Fees	<u>\$240,000</u>
Total:	\$269,000

2013 Calendar Year:

○ Registration Fees	\$35,750
○ Mfr. Annual Report Fees	\$237,000
○ Recycling Surcharge Fees	<u>\$41,922</u>
Total:	\$314,672

2014 Calendar Year:

○ Registration Fees	\$52,000
○ Mfr. Annual Report Fees	\$276,000
○ Recycling Surcharge Fees	<u>\$176,537</u>
Total:	\$504,537

Grand Total: \$1,385,209

Revenue deposited into the Environmental Protection Fund



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Program Challenges

- Manufacturer/Collective Program Compliance
- Cathode Ray Tube (CRT) Management
- DEC Implementation Challenges



Manufacturer/Collective Program Compliance

- Acceptance Program Shortfalls:
 - Only meet minimal convenience requirements
 - Continuous brand/one-for-one collection
 - Program partnerships, contracts and agreements
 - Annual report non-submittal and incompleteness
 - Updating of critical program and contact information

Cathode Ray Tubes (CRTs)



CRT Glass Management

- Inadequate capacity to process discarded CRTs – large backlog
- 2013 North America in 2013 processing capacity of 128,000 tons/year compared to a needed capacity of as much as 390,000 tons/year.
- Due to the lack of processing capability and increased costs for proper CRT management, stockpiles of CRTs are being created.
- Potential new CRT processors – Texas, New York, and Virginia

CRT Glass Processing Technologies

Predominately, there are two technologies available for processing CRTs:

- Glass-to-glass
 - New CRT glass is produced from old CRT glass.
- Secondary lead smelting.
 - Lead is recovered from CRT glass.

A third technology being employed is the processing of CRT glass into Alternative Daily Cover (ADC) for landfills.

- CRT glass is sorted, crushed, and treated with chemicals to prevent lead from leaching. It is then used as ADC in landfills.

CRT Glass Processors

- Cali Resources/TDM
Located in Mexico – Glass-to-glass separation with glass being shipped to India.
- Doe Run Co.
Missouri – Secondary Lead smelter.
- Xstrata Zinc
New Brunswick – Secondary lead smelter.
- Teck Resources
British Columbia – Secondary lead smelter.
- Kuusakowski Resources
Illinois – ADC for landfills



DEC Implementation Challenges

- Unregistered manufacturers & other entities
- Data gathering, entry & verification
- Out-of-state entity tracking
- Timely acceptance standard distribution
- Compliance efforts



Improving Overall Compliance

Department steps to improve compliance:

- **Manufacturers:**
 - Letter sent to all 100+ manufacturers and collectives to provide overall program compliance guidance and a list of common shortfalls (February 6, 2015)
 - Revised annual reports to include updated program details (March 1, 2015)
 - Notice of Violations (NOVs) sent to manufacturers for annual report non-submittal (April 8, 2015)
 - NOVs for inadequate programs and incomplete annual reports will be sent (ongoing)
- **Recyclers:**
 - NOVs sent for annual report non-submittal (April 22, 2015)

Key Activities Looking Forward

- Data management system
- Regulation development
- Continued compliance & enforcement
- Education & outreach



Thank You!

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For more information visit DEC's E-waste

Recycling Website:

<http://www.dec.ny.gov/chemical/65583.html>



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