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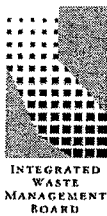
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## Electronic Waste: An Overview of the Implementation of the California Electronic Waste Recycling Act

February 8, 2007

Thank you Mr. Chair and members of the Senate Environment Committee. I am Shirley Willd-Wagner, Manager of the Electronic Waste Recycling Branch of the California Integrated Waste Management Board (CIWMB). At the request of Chair Smith, I will provide an update on our implementation of California's Electronic Waste Recycling Act. Following my remarks I will be happy to answer any questions from Committee members either today, or in follow-up correspondence.

**Background** – In 2001 California clarified that cathode ray tubes and certain other electronic wastes are presumed to be hazardous and could not be disposed in landfills. In a survey commissioned by the CIWMB, it was estimated that more than 6 million old TVs and computer monitors were being stockpiled in California homes alone. This created a management and disposal issue that had to be addressed. Local jurisdictions were shouldering the primary financial burden and consumers frequently faced end-of-life fees of between \$10 and \$30 per device.

In response to the dilemma at hand the CIWMB, as well as other state agencies, local jurisdictions, industry representatives, environmental groups and other stakeholders worked at various levels to seek a solution. Many options and scenarios were explored, including those discussed at the national level. In 2003 the California State Legislature passed Senate Bill 20, The Electronic Waste Recycling Act (Act). The first of its kind in the nation, this law established a funding mechanism to provide proper end-of-life management for electronic products from all consumers, including households, businesses and schools.

The driving forces behind the Act are:

- Financial relief to local jurisdictions who bore the burden of management before the passage of the Act
- Cost-free recycling opportunities for consumers throughout the state
- Reduction and prevention of illegal dumping
- Elimination of the stockpile of waste monitors/TVs
- Decrease the amount of hazardous materials used in covered products

To achieve these objectives, the Legislature established a financing system to support an infrastructure that would provide sustainable, convenient management options for these items. In short, the Act calls for a 6, 8, or 10 dollar fee paid by consumers of covered

electronic devices at the time of purchase. These funds are used to make payments to authorized collectors and recyclers of covered electronic waste to reimburse the net cost of proper material management. The program has flexibility to add and remove electronic products to keep up with rapid growth and change inherent in the electronics industry. It also has provisions to adjust both the fee paid by consumers as well as the payments made to collectors and recyclers to ensure fund stability.

**Implementation** – Program activities began January 1, 2005. At the state level, the program is a cooperative effort between the California Integrated Waste Management Board, the California Department of Toxic Substance Control (DTSC) and the State Board of Equalization.

DTSC is tasked with identifying and listing covered electronic devices that are deemed hazardous when disposed. Currently, devices subject to the Act are:

- Cathode Ray Tube (CRT) devices
- Televisions and computer monitors containing CRTs
- Televisions and computer monitors containing liquid crystal displays (LCDs)
- Laptop computers with LCD screens
- Plasma televisions
- Personal portable DVD players with LCD screens (to be added effective July 1, 2007)

Retailers collect the advance recycling fee (ARF) from California consumers and remit the fees to our revenue collection agency, the Board of Equalization. Retailers retain 3 percent of the fees collected to cover their operational costs. Revenue is placed into a fund managed by the CIWMB.

The flow of materials and money in the SB 20 program is depicted in the attached diagram. In summary:

- Recovery and recycling payments are made to approved e-waste recyclers to cover the net cost of collecting and recycling covered electronic wastes.
- Approved recyclers submit payment claims to the CIWMB for the amount of covered electronic waste collected and recycled.
- CIWMB Program staff reviews these claims in detail and pays the recycler a combined payment rate of \$.48 per pound of material canceled and properly documented.
- The Recycler must pay the Approved Collector \$.20 per pound of eligible material transferred to the Recycler.
- Payment is only made for properly documented covered electronic wastes generated in California.
- Payments are limited to recycling (cancellation) activities that occur in-state.

**Program Statistics** – The payment system created by SB 20 spurred the development of a robust e-waste collection and recycling infrastructure, creating jobs and business opportunities in the state. Voluntary participants represent a diverse group, including non-profits organizations, landfill operators, local governments and private entities. Currently, over 500 collectors and 55 recyclers are approved by the State to participate in the program. CIWMB works with DTSC to ensure that collectors and recyclers handle these materials in a manner protective of public health and safety and the environment.

Approximately \$77 million is collected annually in advance recycling fees. In 2005, over \$31 million representing 64.8 million pounds, of covered electronic waste was submitted for payment under the auspices of SB 20. Recycling payment volume has more than doubled in the first two years of program implementation as projections for 2006 are \$62 million in claims for 130 million pounds. (See attached growth graph.)

2x

**Successes** – Staff is often asked if the E-waste Recycling Program has been a success. If success is measured by progress toward legislative objectives, the answer is yes. Local government is no longer bearing the financial burden of e-waste management; the average California consumer who pays the fee now has widespread access to cost free recycling opportunities for discarded devices covered by the law; e-waste collection and recycling infrastructure has grown, creating jobs and business opportunities; and we are finding that due to Department of Toxic Substances Control inspections, more recycling facilities are operating in compliance with environmental standards than ever before.

**System Challenges** – Implementing the first comprehensive e-waste management law has not been without challenges. Primary among those is ensuring that payment is made only for eligible material; specifically material that is generated by a California source. Since California is the only state paying for collection and recycling activities, entrepreneurs may be tempted to bring material in from out of state to enter the SB 20 payment system. Because it is likely that fraud will occur, we are working closely with our partners at DTSC to establish a fraud prevention and enforcement effort. In our attempt to prevent ineligible material from entering the payment system, regulations require detailed documentation describing the generating source. During the first two years of the program, we've worked extensively with stakeholders to develop procedures that will protect the integrity of the fund, while still allowing for efficient and flexible business operations.

Before the program began, staff and stakeholders were concerned that internet sellers from out-of-state might create a competitive disadvantage to California retailers. Two years into the implementation, we have not found this to be a significant issue. The Board of Equalization believes the majority of affected internet and catalogue retailers are participating in the program by remitting the fee.

**Looking Ahead** – California continues to be engaged in efforts at the federal level to develop a national e-waste recycling system and to monitor initiatives in other states. Certain looming issues will be faced not only by California, but by all states as well as the federal government. Export of hazardous wastes can only be effectively addressed at the national level. California's program requires notification of export activities at least 60 days before exportation, and limits exporting to countries whose facilities can demonstrate that their operations meet or exceed the binding guidelines of the Organization for Economic Cooperation and Development (OECD) for the environmentally sound management of the waste being exported. However, it is uncertain whether these measures are sufficient to ensure appropriate management of the residual material resulting from electronic waste recycling.

Currently the primary market for processed CRT glass is "glass-to-glass" recycling; leaded glass used to manufacture new cathode ray tubes. Glass markets may become a major concern as the demand for leaded glass decreases. Estimates indicate that whereas we will continue to see CRT devices in the waste stream for another 10 – 12 years, the market for leaded glass may be non-existent in 3 – 5 years. The other primary use of leaded glass is in smelting operations. The sole lead smelter in the United States has experienced delays in processing CRT glass, and has not been able to keep up with the feedstock generated in California.

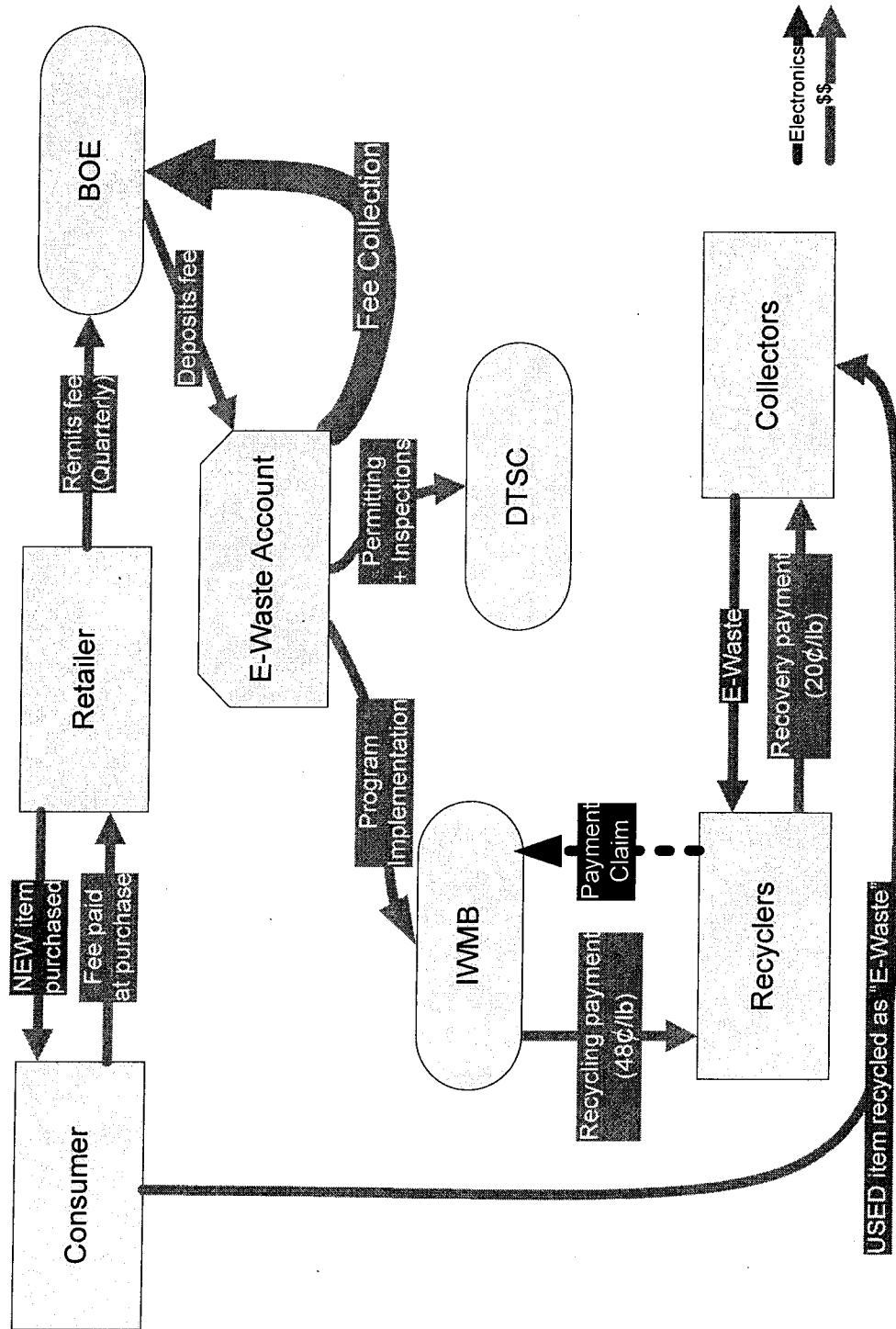
**Public Education** – California consumers play a key role in the proper collection and recycling of hazardous materials. The CIWMB has undertaken an extensive public outreach campaign in partnership with retailers, to explain the need for proper recycling of unwanted devices, and the resulting fees paid by California consumers. A major part of the campaign is an eRecycle.org website that provides a one-stop information portal on e-waste in general and specific provisions of the Act. Consumers can search for the nearest location to recycle their old devices. Many different types of public education materials, including downloadable point of purchase ads and banners, have been developed and are available for use by retailers and others to promote the program.

California Governor Arnold Schwarzenegger has been fully supportive of the implementation of this ground breaking legislation. He has reaffirmed this commitment in his 2006 "State of the State" address as well as his continued support through the budget process for the program.

He continues to support our work with industry, recyclers, local jurisdictions and other stakeholders and has tasked us to build a program that is sustainable and workable for all those involved and consistent with his charge to protect the public health and environment while strengthening California's business economy. With this support and the support of the stakeholders we are confident that this program will achieve its goals.

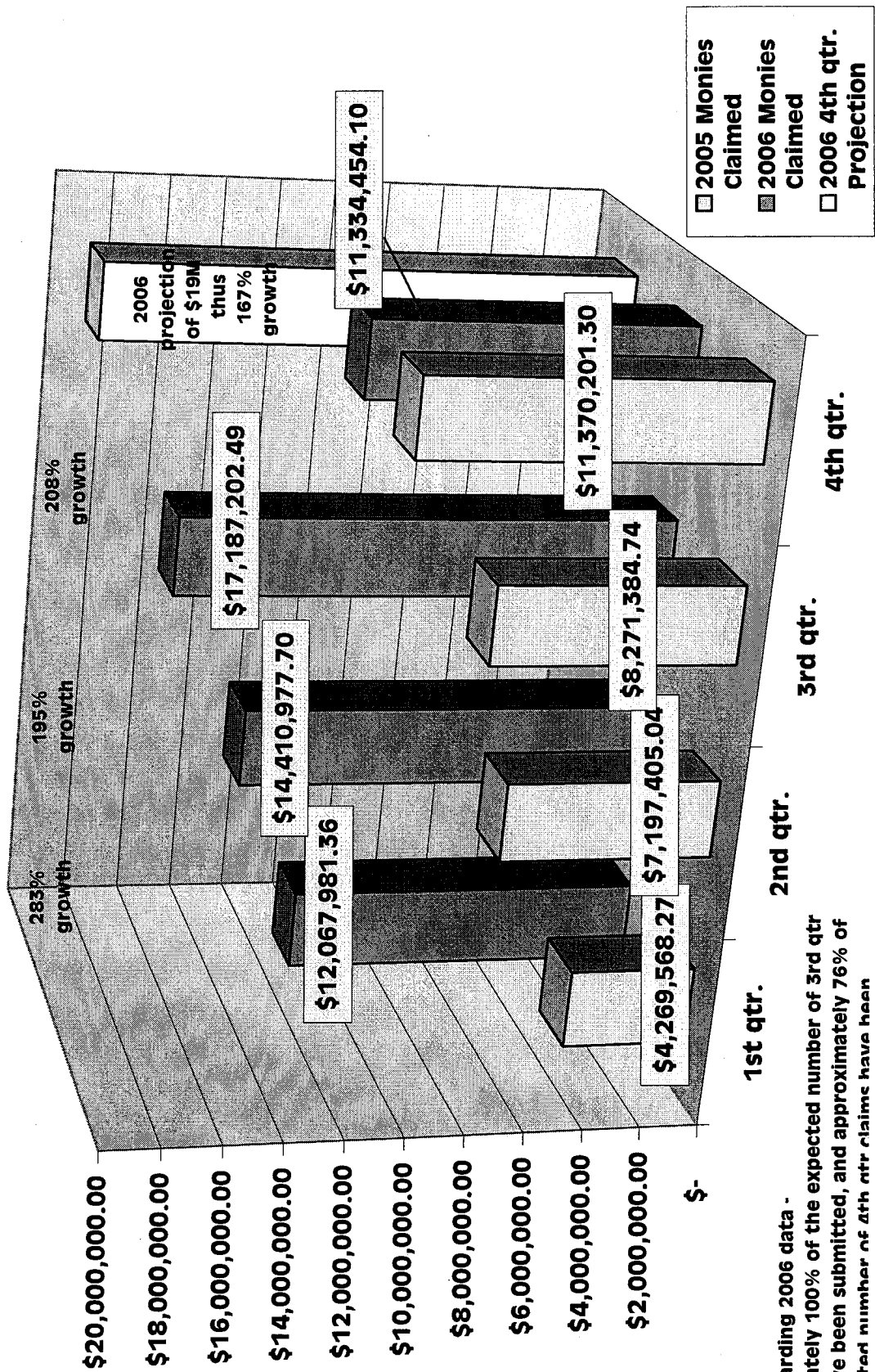
Attachments (2)

# E-Waste Recycling Program Cash Flow



5x

**CIWMB E-Waste: Growth in Program from Inception to Present  
(January 24, 2007)**



Note: Regarding 2006 data - approximately 100% of the expected number of 3rd qtr claims have been submitted, and approximately 76% of the expected number of 4th qtr claims have been

6x

**Testimony of  
Assemblyman William Colton, Chair  
NYS Legislative Commission on Solid Waste Management  
at the New Jersey Senate Environment Committee Hearing on  
Electronics Recycling  
Trenton, NJ  
February 8, 2007**

Good afternoon. First let me thank Chairman Bob Smith and members of the Senate Environment Committee for affording me the opportunity to testify about our legislative initiatives for electronics equipment recycling in New York State. Public hearings on this issue are very important because of the ever increasing problems associated with disposal of electronic equipment for our states, the nation, and the international community. Creating a high profile for electronic equipment disposal will bolster our policy-making efforts to responsibly manage these materials and foster their recovery to the greatest extent feasible.

While I believe the ideal policy for electronics recycling should be established at the federal level, it is clear that there is insufficient support for passage of any comprehensive federal legislation. As you

know, years of discussion among stakeholders have failed to reach consensus on this matter, particularly on the mechanism for financing electronics recycling programs as well as the scope of the recovery programs. In the absence of consensus at the federal level, state policymakers have moved to address management of electronics waste at the state level. States including Maine, California, Maryland, and Washington State have initiated electronics recycling programs.

I and my staff at the Legislative Commission on Solid Waste Management, have initiated, organized, and participated in workshops and roundtables to encourage electronics recovery. One of the most successful efforts was spearheaded by the Council of State Governments, Eastern Regional Conference (CSG) and the Northeast Recycling Council (NERC). This process began in early 2005 among ten northeast states to develop “model” legislation for potential adoption by ten Northeastern States for recycling waste electronic equipment. For more than one year, over 50 legislators, legislative and state environmental agency staff and other stakeholders contributed to

the effort. Rona Cohen from CSG will describe in greater detail the process and its outcomes.

The final consensus among the participants in the CSG/NERC process supported model legislation employing **producer responsibility** (PR) for electronic equipment recycling, recovery and reuse. For years I have supported producer responsibility as the most appropriate mechanism to finance and promote environmental stewardship. The principle alternative to a producer responsibility system, an Advanced Recovery Fee (ARF), was considered early in the CSG/NERC process and rejected in favor of a producer responsibility system. Some of the objections to an ARF were:

- an ARF is anti-consumer by charging the consumer an additional fee at the time of purchase, while a PR model internalizes recycling costs of the products, which will likely encourage greater “green” manufacturer design.
- an ARF puts the responsibility on government, which in New York State would be on local governments, to establish

collection/recycling systems, while PR places the primary responsibility on electronics manufacturers.

- an ARF puts greater responsibility on retailers, among whom are small businesses, than a PR system.

It is my belief that the producer responsibility philosophy provides the most appropriate policy initiative for electronics recycling in New York State. Therefore I have proposed electronics recycling legislation based on that concept for a number of years.

This year, I have re-introduced two major electronics recycling bills that support producer responsibility for the take-back of CEDs. These bills would require manufacturers to take back or pay for their share of covered electronics devices(CEDs) which are defined as personal computers, computer monitors, and televisions. Both bills would require CED manufacturers to pay a registration fee of \$5,000. The bills also require manufacturers to select one of the following options:

1. establish their own collection program for recycling their share of returned electronics, or
2. pay a fee, based on the weight of their share, to fund a state-administered program to collect, handle, and recycle returned electronics.

These bills evolved from my participation in the CSG process.

The primary difference between the bills is the determination of the manufacturers' share of electronics to be collected:

- **Assembly 2798** bases the manufacturer's share of responsibility on its percentage by weight of annual **sales** of CEDs in the State. This approach is consistent with the model established from the CSG/NERC project.
- **Assembly 2648** bases the manufacturer's share on the percentage by weight of annual **returns** of covered electronics products in the State.

While there are reasonable arguments favoring a return share or a market share approach, in my opinion there is no doubt that electronics recovery and recovery must incorporate **producer responsibility** for

the system. Based on that premise, I have put forward market share and return share proposals to see which proposal receives the broadest support among the stakeholders.

A producer responsibility bill has the advantage over an ARF approach in that it is more directly related to the actual number of CEDs recycled and the cost of recycling such CEDs, rather than what may be the future costs of recycling purchased units in future years.

Additionally, the PR approach is better able to place responsibility for recycling on manufacturers, who will be in a better position to design products in a more environmentally favorable way, rather than on taxpayers or consumers.

Although neither bill reached the NYS Assembly floor last year, the return share bill was favorably reported out of the Assembly Environmental Conservation Committee.

The NYS Senate also introduced both of these bills last year, and reported the market share bill from its Environmental Conservation Committee.

I plan to move forward with both of these bills in this year's session. My success will depend on a number of factors, including the support generated by the various stakeholders, ie. manufacturers, retailers, recyclers, environmental groups, consumers and taxpayers. The PR approach has generated support from each of these sectors.

The new Governor and the Senate will play a key role in an ultimate enactment. Governor Spitzer's Executive Budget released last week recommended the addition of two staff positions in the State Department of Environmental Conservation for electronics recycling. This is a good sign that the new administration plans to increase attention to this issue.

Hopefully, with increased understanding and support for environmental stewardship for electronics recycling and recovery, and increased opportunities for development of more sustainable products, we will be able to enact one of these producer responsibility proposals for the management of electronics waste.

Thank you again for providing me with the opportunity to participate in this hearing. I would be happy to answer any questions you may have.

# ELECTRONIC RECYCLING OPTIONS

TYPE	POSITIVE	NEGATIVE
<p>consumer pays when they recycle</p> <p>government funds program totally from general revenues</p> <p>"Advanced Recycling Fee" (ARF) retailer collects fee on sale of new products</p> <p>"Manufacturer Responsibility" product makers pay annual fee to state to cover recycling costs on return share or market share basis</p>	<p>simple, no burden on manufacturers or retailers, cost recovery probable</p> <p>simple, no burden on manufacturers or retailers</p> <p>no burden on manufacturers, cost recovery likely</p> <p>little burden on retailer, cost recovery likely, incentive for manufacturer to increase recyclability, low public resistance</p>	<p>low compliance, significant public dissatisfaction, not desirable for recyclers, no incentive for manufacturers to improve recyclability</p> <p>unreliable revenue stream, no incentive for manufacturers to improve reliability</p> <p>high resistance from retailers, some public resistance, greatest administrative challenge due to many retailers, no incentive for manufacturers to increase recyclability, creates challenges for manufacturers who have recycling programs</p> <p>high resistance from manufacturers, significant administrative challenge</p>

15x

Representative Chris Ross  
158th Legislative District  
Pennsylvania House of Representatives



**THE COUNCIL OF STATE GOVERNMENTS  
EASTERN REGIONAL CONFERENCE**

**TESTIMONY OF THE COUNCIL OF STATE GOVERNMENTS/EASTERN  
REGIONAL CONFERENCE BEFORE THE NEW JERSEY STATE SENATE  
ENVIRONMENT COMMITTEE  
HEARING ON ELECTRONIC WASTE**

February 8, 2007

Chairman Smith and Members of the Committee:

My name is Rona Cohen, and I am the Senior Policy Analyst in the Energy & Environment Program at the Council of State Governments/Eastern Regional Conference (CSG/ERC). I am pleased to have the opportunity to provide you with this testimony today regarding our efforts to address the proliferation of electronic waste in our region.

CSG/ERC comprises state officials from all three branches of government in the ten Northeastern states from Maine to Delaware,<sup>1</sup> the U.S. Virgin Islands, Puerto Rico and the Eastern Canadian provinces New Brunswick, Newfoundland & Labrador, Nova Scotia, Ontario and Québec. During the fall of 2004, several members of the CSG/ERC Energy & Environment Committee, concerned with the lack of comprehensive programs to collect, reuse, process and recycle discarded computers, televisions and other electronic devices in their states, requested that CSG/ERC facilitate a process to help legislators develop a uniform, coordinated legislative effort governing end-of-life electronics management in the Northeast.

Currently, there is no national program to address the proliferation of e-waste in a comprehensive manner. Four states – California, Maine, Maryland and Washington -- have passed laws that mandate different approaches to financing and administering electronics end-of-life management systems. More than thirty other states have introduced legislation governing electronic waste. Many state officials and stakeholders in the Northeast agree that in lieu of a national program, a coordinated regional effort is preferable to having a patchwork of laws and regulations resulting in increased management and compliance costs and decreased recycling opportunities.

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<sup>1</sup> Connecticut, Delaware, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island and Vermont.

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From February 2005 through April 2006, CSG/ERC, in collaboration with the Northeast Recycling Council, Inc., (NERC), a non-profit organization that operates in the same ten Northeastern states as CSG/ERC, facilitated a dialogue among legislators in the region with the goal of creating model legislation that can be filed in each of the participating states.

As part of this dialogue, CSG/ERC and NERC solicited direction from state environmental agency solid waste management and recycling staff in the ten Northeastern states regarding electronics end-of-life legislation. CSG/ERC and NERC also hosted two multi-stakeholder meetings, and additional single-stakeholder meetings that brought together more than fifty legislators, legislative staff and environmental agency solid waste management staff from ten states and the Canadian province of Québec with more than one hundred representatives of electronics manufacturing companies, retail companies, leasing companies, recycling companies, reuse organizations, environmental groups, state recycling organizations, local and state recycling agencies to hear their suggestions regarding key elements of potential electronics legislation. In addition, more than 50 written statements were received and considered.

Last April, CSG/ERC and NERC released model legislation that reflected the consensus of the state legislators who participated in the project. The legislation takes a producer responsibility approach to financing an end-of-life electronics management system. The model requires manufacturers of computers and televisions to take full financial responsibility for the collection, transportation and recycling of computers and televisions sold to individual consumers in a state.

Under the CSG/ERC – NERC model, each manufacturer's obligation, or share, would be based on a percentage of its sales of covered electronic devices in a state. Each manufacturer would have the option of either paying a fee to cover the cost of collection and recycling its obligation, or setting up its own take-back program.

The legislators participating in the CSG/ERC – NERC project favored the producer responsibility approach for the following reasons:

- 1) Legislators felt strongly that the financing mechanism for an end-of-life electronics management system must not impose direct fees on the consumer – either in the form of an Advance Recycling Fee (ARF), paid at the point of retail sale of a covered electronic device, or an end-of-life fee, paid at the time of disposal of the device. The general consensus among participants in the CSG/ERC – NERC project was that mandating an ARF, or any other direct fee, would be akin to levying a new tax on consumers. The officials believed that there would be little public support for such a “tax,” especially in states in our region that do not have a sales tax.
- 2) Participants determined that retailers should not be involved in the collection of fees. The legislators based this decision on their extensive discussions with representatives of several national retail chains, who maintained that collection of

an ARF at the point of retail sale would be costly and overly burdensome for the industry.

- 3) By requiring manufacturers to accept full financial responsibility for the collection and recycling of covered electronic devices sold to consumers in a state, legislation based on producer responsibility would provide incentives for manufacturers to drive down the costs of collection and recycling, leading to greater market efficiencies.
- 4) The producer responsibility approach would also create an incentive for manufacturers to design products that would be more easily recyclable.

Legislation based on the model has been filed in the New Jersey State Assembly, and also in Connecticut, New York, Pennsylvania, Vermont and Puerto Rico.

Please feel free to contact me if I can provide you with any additional information concerning our regional effort. Thank you for providing me with the opportunity to discuss our project with you.

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## Philips Electronics North America Corporation

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TESTIMONY OF PHILIPS ELECTRONICS  
S 554 ELECTRONICS PRODUCTS RECYCLING  
SENATE COMMITTEE ON ENVIRONMENT  
February 8, 2007

Mr. Chairman and members of the Committee, Philips Electronics North America is testifying in support of the amended version of S. 554. Experience in California, a number of European countries and some Canadian provinces has clearly shown that an advance recycling fee (ARF) provides a sustainable and adequate source of funds to local governments and recyclers for recycling end of life electronics in the most cost-effective manner possible while maintaining a level playing field in the market. It also provides the proper incentives to New Jersey electronics manufacturers such as Philips Electronics to continue to be leaders in environmental design improvement without adversely affecting such manufacturers.

Philips Electronics is one of the world's largest global electronics company in the world. Philips Electronics North America employs 20,000 people in the US and sells medical equipment, consumer electronics, lighting, domestic appliances and semiconductors. Philips employs nearly 1,000 people in New Jersey at the US headquarters for Philips Lighting in Somerset and the US headquarters for Philips Accessories and Computer Peripherals in Ledgewood. Our company is a leader in environmental design improvements. While a more complete list of our accomplishments is included in the attachment, I want to highlight that Philips Electronics has been the top company in the leisure goods market sector in Dow Jones Sustainability Index for three of the last four years and Philips Electronics was designated by Global 100 as one of the top 100 most sustainable companies in the world for three years in a row.

Our full position on electronics waste is found in the attached position statement. A summary of our position is as follows:

1. The Coalition agrees that states should establish a source of funding for electronics recycling.
2. Supporters of producer responsibility say that it would provide an incentive to manufacturers to make better products but experience and financial analysis show that this is not the case.



3. Producer responsibility/manufacturer fee approaches actually provide a disincentive because these approaches are not economically viable for the vast majority of responsible manufacturers who are the leaders in making environmental improvements.
4. Other regulatory and voluntary programs already encourage the development of more energy efficient and environmentally preferable products.
5. The California ARF system for electronics waste has been a significant success.
6. The arguments raised against ARFs are not justified.
7. States should adopt an advance-recycling fee on electronics to provide funding for historical and future e-waste recycling programs.

I would be happy to answer any questions from the Committee.

POSITION STATEMENT  
ELECTRONICS MANUFACTURERS COALITION FOR RESPONSIBLE  
RECYCLING  
E WASTE RECYCLING  
January 2007

The Electronics Manufacturers Coalition for Responsible Recycling (Coalition) represents many of the largest consumer electronics companies in the world who have come together to support the use of an advance-recycling fee (ARF) to pay for a consumer electronics-recycling program. The coalition members are Canon, Epson, Hitachi, JVC, LG, Mitsubishi, Panasonic, Philips, Pioneer, Sanyo, Sharp, Sony, Thomson, and Toshiba. The Coalition supports an ARF because experience in California, a number of European countries and some Canadian provinces has clearly shown that an ARF provides a sustainable and adequate source of funds to local governments and recyclers for recycling end of life electronics in the most cost-effective manner possible while maintaining a level playing field in the market. Many states currently use ARF type funding mechanisms for recycling of lead acid batteries, tires and beverage containers.

Summary

1. The Coalition agrees that states should establish a source of funding for electronics recycling.
2. Supporters of producer responsibility say that it would provide an incentive to manufacturers to make better products but experience and financial analysis show that this is not the case.
3. Producer responsibility/manufacturer fee approaches actually provide a disincentive because these approaches are not economically viable for the vast majority of responsible manufacturers who are the leaders in making environmental improvements.
4. Other regulatory and voluntary programs already encourage the development of more energy efficient and environmentally preferable products.
5. The California ARF system for electronics waste has been a significant success.
6. The arguments raised against ARFs are not justified.
7. States should adopt an advance-recycling fee on electronics to provide funding for historical and future e-waste recycling programs.

1. *The Coalition agrees that states should establish a source of funding for electronics recycling.*

The Coalition believes that historical and future electronic waste poses a burden on local governments and that there are recoverable materials in these products. Therefore, the Coalition agrees that there should be a source of funding for electronics recycling.

2. *Supporters of producer responsibility say that it would provide an incentive to manufacturers to make better products but the experience and financial analysis show that this is not the case.*

a. *Established manufacturers do not need any additional incentives to make more environmentally sensitive products.*

Established manufacturers already are leaders in environmental design improvements and have done so without the need for such an incentive. Using Philips as an example illustrates the level of activity that has occurred without such an incentive:

-- Philips has environmental requirements going back to the 1980s with a first environmental company-wide program since 1994.

-- Philips has publicly reported on its environmental performance since 1998.

-- Philips banned the use of mercury, PBDE, PDD and cadmium and 39 other substances from its product portfolio in 1998 and lead and hexavalent chromium in 2004, unless a product division received a specific exemption from the company.

-- Philips publishes an annual Sustainability report

[www.philips.com/sustainability/report](http://www.philips.com/sustainability/report)

-- A biannual report prepared by SustainAbility, in conjunction with the United Nations Environmental Program (UNEP) and Standard & Poors, "Tomorrow's Value: The Global Reporters 2006 Survey of Corporate Sustainability Reporting," ranked Philips 12<sup>th</sup> in the world in sustainability reporting and singled out Philips and others for "...shifting the focus of their sustainability strategy towards a more progressive and entrepreneurial approach that seeks to identify opportunities for strategic innovation and market building."

[http://www.sustainability.com/downloads\\_public/insight\\_reports/Tomorrows\\_Value\\_Exec\\_Summary.pdf](http://www.sustainability.com/downloads_public/insight_reports/Tomorrows_Value_Exec_Summary.pdf)

-- In 2004, 2005 and 2007 Philips was the top company in the leisure goods market sector in Dow Jones Sustainability Index. (Another coalition member, Sony, achieved this position for 2006.)

-- Philips was designated by Global 100 as one of the top 100 most sustainable companies in the world for three years in a row. (Two other coalition members, Panasonic and Canon, also designated) [www.global100.org](http://www.global100.org)

-- In 2004 Philips developed 21 "Green Flagship Products" and in 2005 Philips developed another 50 products -- "Green Flagship Products are those that offer better environmental performance than competitors or predecessor products in at least 2 focal areas (hazardous substances, energy conservation, recycling, packaging and weight).

-- In August 2006 the European Imaging & Sound Association named one Philips flat screen model as "European Green TV of the Year 2006-2007" because it used 15% less energy than its nearest competitor and its easier end of life disassembly.

-- All Philips' televisions and DVD players comply with Energy Star requirements.

-- Philips was the first computer monitor company to offer full line of lead free (RoHS complaint) flat panel monitors and Philips is 100% RoHS compliant in consumer electronics worldwide as of Q4 2005.

-- Philips' lamps have the lowest mercury in the lamp industry and we have the only mercury-free xenon headlamp used in the automotive industry.

-- Philips Lighting received recognition from the US EPA as being the first company in the US to commit all of its US based plants to the EPA National Partnership for Environmental Priorities Program. Philips committed to eliminating all lead from its lamps and to reducing mercury use in lamps by 720 pounds, the equivalent of recycling 90 million Philips lamps manufactured in this century.

-- Philips is part of a core group of companies pushing the "Energy Efficiency in buildings" program of the World Business Council for Sustainable Development, with a goal having buildings consume zero net energy from external power supplies and produce zero net carbon emissions while being economically viable to construct and operate.

-- Philips recently called for a joint effort to stop the sale of energy inefficient incandescent bulbs by 2016.

Philips undertook these actions because sustainability is a key element of our market strategy. Sustainability provides a business opportunity and is essential to reduce company risk and to protect our reputation. The chart attached to the end of this statement clearly demonstrates that the stocks of companies listed on the 2006 Global 100 significantly outperformed an index of global companies. Matthew Kiernan, CEO of Innovest, the financial advisory firm that helped develop the Global 100 list, says of these companies:

"G100 companies are proactive in their response to investor and other stakeholder demands for better management of risks such as climate change. We believe that these sustainability leaders will create significant long-term value through innovation, lower costs, better employee recruiting and retention and consumer choice. G 100 companies will likely continue to out-perform the competition as a result."

Established competitors all have taken actions without any need for the alleged incentive provided by producer responsibility mandates.

Companies understand that responding to environmental issues can enhance global growth ("Green is Good for Business," Business Week May 8, 2006, page 124). Walmart has undertaken a major sustainability initiative (CNN Money, "The Green Machine," July 27, 2006.) A book about to be released by two Yale university professors, "Green to Gold: How Smart Companies Use Environmental Strategy to Innovate, Create Value and Build Competitive Advantage," documents how companies are incorporating sustainable development into their corporate strategy. The notion that responsible companies need incentives to make environmentally superior products is outmoded and wrong.

Sebastian Mallaby, writing in the August 7, 2006 Washington Post, notes that as the value of companies is increasingly in intangible assets such as brand value rather than physical assets, companies are working harder to protect their brands by being more responsive to customer opinions including those involving environmental concerns.

“Or consider the environmental behavior of U.S. companies at home. This used to be a classic case of politics leading business. For most of the past generation, regulators have forced environmental rules on grumbling corporations. But in the current debate on climate change, this order has reversed itself. Impatient companies are capping their own carbon emissions.”

At the E-Scrap 2006 conference, design expert Pamela Gordon of Technology Forecasters, Inc. presented a paper, “Designing Solutions for Reuse and Recycling.” Ms. Gordon said that Japanese companies and some European companies such as Philips and Thomson were making strategic design changes to try to achieve a competitive advantage while older, US, Chinese and small manufacturers focused only on ad hoc changes to compliance. Ms. Gordon’s analysis shows that the historic consumer electronics manufacturers are making strategic design changes without the need of any so-called incentive.

Finally, the lead story in the January 29, 2007 edition of Business Week Magazine has a lead story on socially responsible and eco friendly practices are helping companies make money. On page 53, in a chart titled “Who’s Doing Well by Doing Good,” Business Week identified top-rated companies by industry. In the Household Durables category, Business Week identified Philips Electronics, Sony and Panasonic as the top-rated companies. A fourth coalition member, Toshiba, was one of three companies highlighted in the Computers and Peripherals category.

All of the available evidence shows that the actions of responsible companies shows that they do not need artificial incentives to make environmental improvements in the design of their products.

*b. Making manufacturers pay a fee for recycling in the hopes of encouraging better environmental design makes no financial sense.*

Sorts of electronics collection events show that televisions last on average 14-17 years and computers last 11 years. It is inconceivable that a potential savings 14-17 years in the future will have an impact on environmental design decisions made today. It is unrealistic to believe that companies make investment decisions based on the possibility that it might lower recycling costs so far in the future. The cost of capital is too high and the return is too low for this to be a serious factor in design.

A recent article in the October 12, 2006 issue of Business Week Online, “CEOs Feel the Heat,” by Louis Lavelle, shows the increasing pressure that corporate CEOs are under to generate adequate results. It quotes data from Challenger, Gray and Christmas, a CEO placement firm, as showing that CEOs are lasting less time than ever. In 2006, 28% of CEOs fired in 2006 had less than three years in their positions. The article says that CEOs now have just a year or two to demonstrate that they can achieve the results demanded by boards of directors. This shorter period of time to achieve results in completely at odds with the notions that CEOs will make investments that might have a payoff more than a decade in the future.

The concept of payback is a main factor in the Energy Star program that explicitly includes recovering investment in reasonable period of time as an essential element to establishing an Energy Star specification for a product. There is no analysis containing any evidence to the contrary.

*c. Imposing a manufacturer fee does not provide any incentive for improved design.*

A recent analysis of producer responsibility concludes that imposing a fee on manufacturers does not provide any environmental design incentive.

“Providing incentives for ecological design of products is a kind of holy grail for EPR proponents...It is difficult to see how true cost-internalization can be achieved for more complex products, such as electronics...Fees on manufacturers to provide incentives for improved design would have to reflect a wide array of product characteristics such as weight, bulk, chemicals constituents of the product and degree of recyclability. Fees would need to be tailored not just to a product class made by several manufacturers...but to a firm’s individual products and models. If EPR were implemented through a physical take-back system rather than up-front fees, products would have to be tracked and sorted out of the waste-stream by brand name – a daunting bureaucratic challenges with very high transaction costs. “Planning the Funeral at the Birth: Extended Producer Responsibility in the European Union and the United States,” Harvard Environmental Law Review, 2006.

Moreover, all money spent by manufacturers to collect and recycle e-waste is not available for funding innovation initiatives to create more environmental friendly products.

3. *Producer responsibility/manufacturer fee proposal actually provide a disincentive because they are not economically viable for the vast majority of responsible manufacturers who are the leaders in making environmental improvements.*

Proponents of producer responsibility or manufacturer fee proposals say that manufacturers would pass the cost of such programs on in the price of the product. That is not feasible in today’s economic environment. It also is not economically feasible to absorb the cost based on the current state of profitability in the industry. Ironically, the established manufacturers have higher costs than newer Asian competitors in part because of the effort they devote to environmental design. Increasing the costs of the established manufacturers that they cannot pass on would adversely affect the very companies making the design changes that the proponents of these concepts would claim to want. These concepts would provide a disincentive to spending additional resources on such improvements, as companies would have to make cuts to pay for the fee.

a. *The Consumer Electronics Industry is Being Flooded by Low Cost Asian Manufacturers Who Are Not Making Environmental Design Improvements Being Made by Established Manufacturers*

Seventy percent of 130 television manufacturers were not in business ten years ago (Smart Money 3/2005 article). Gartner, a leading provider of global technology research, reports similar numbers. According to Gartner "The emergence of China as a worldwide manufacturing powerhouse added further pressure to the consumer electronics industry, as state sponsored original design manufacturers emerged to build consumer products for anyone seeking to enter the consumer electronics market as a new "manufacturer...Any company with the resources and a market entry point can deliver a product relatively quickly by contracting with these ODMs." (The Consumer Electronics Industry in Flux, November 16, 2005).

New entrants are charging much lower prices in part because of lower operational costs and no environmental design improvement efforts. One new company, Byd:sign (pronounced "by design") sold 70,000 televisions with a staff of just 19 people by keeping prices 35 to 40% below those of bigger competitors. According to the story (Newsweek International, January 23, 2006), "Prices are plummeting as more and more players jump into the game, many of them unknown names out of Taiwan and Mainland China." Olevia, made by Syntax-Brilliant, makes the Number 1 selling television at Amazon.com. It sells products at 20-30% below name-brand prices. Taiwan-based computer manufacturer, Acer Inc, "strives to run the leanest possible operations so it can offer low prices and still profit." (AP 2/26/06) According to Bob O'Donnell, an analyst at IDC, a global market intelligence firm, "You and I can start an LCD company tomorrow. You buy some panels and circuits, get a Taiwanese (contract manufacturer) and, bam, you're in business. Given that environment, there are people fighting for survival." Quoted in "TV prices dropping too fast, Sony says," In ZDNET.com, December 11, 2006.

According to a study released by the advertising consulting group, Vertis, brand names are becoming less influential when consumers are deciding where to shop for home electronic products. Vertis Press Release, "Appeal of Discounts and Coupons Increases Among Home Electronics Consumers," June 13, 2006. The effect of low-cost competitors is summarized in "On the Undercutting Edge of Electronics" in the November 30, 2006 edition of the Washington Post. "Suppliers, who are also battling for market share among consumers, have lowered their costs to compete with cheaper, second-tier brands."

The effect of global competition on pricing power is summed up in the February 5, 2007 edition of Business Week in an article written by Senior Editor, James C. Cooper:

"The overarching change, however, is the way globalization and technology have altered corporate pricing behavior in the face of rising costs. The resulting intensification of competitive forces limits the ability of companies to simply mark up prices based on cost increases. It has made cost control, rather than pricing power, the driving force behind corporate profit margins and earnings growth." Page 25.

*b. Retailers have significant impact on pricing and limit the ability of manufacturers to pass on costs.*

Costs cannot be passed on because of intense competition and power of retailers. The financial services company, Morningstar, in a recently published book, "The Five Rules for Successful Stock Investing," says in a section titled "What's not to Like in Consumer Products," "Increasing Power of Retailers – As Wal-Mart has increasingly come to dominate the U.S. retail landscape, consumer goods manufacturers have lost much of the pricing power they used to enjoy. Everybody wants their products in Wal-Mart stores, which means that Wal-Mart is able to dictate many of the terms under which it will sell these products, including price." (Page 309)

The managers of the Clipper mutual fund recently made a similar statement June 30, 2006 Semi-annual report to shareholders. "Consider, for instance, that one of the reasons that many companies have so little pricing power is because of the strength of Wal-Mart and Costco, both of which we own. These retail juggernauts relentlessly pressure their suppliers on behalf of their customers." (Pages 4-5)

Other large electronics retailers have similar pricing power.

Dell, which sells direct to customers making it a retailer as well as manufacturer, reported in July 2006 very poor quarterly results. In "What Dell Should Do," an article in the July 21, 2006 Business Week Online, Charles Wolf, an analyst at Needham & Co, says that Dell should consider selling through retailers. He notes, however, "A move into big-box retailers like Best Buy and Circuit City would mean markups that would erode Dell's price advantage."

Retailers also are able to affect prices by increasing the sales of private label products at lower prices. According to ISuppli and the Consumer Electronics Association, the amount of private label sales of electronics is increasing. "A Peek at Private Label Consumer Electronics Trends," Electronics News, January 24, 2007.

Ironically even electronics retailers are now feeling the effects of competition putting pressure on them to further reduce prices from retailers. According to "On the Undercutting Edge of Electronics" in the November 30, 2006 edition of the Washington Post, competitive retail pressure for television sales is having a significant adverse effect on retailers. "All told, industry experts say, retailers are not making much – if any – money off TV sales."

*c. As a result of pricing pressure from retailers and new Asian competitors, the consumer electronics market faces very low operating margins that do not allow for additional costs to be passed on.*

A story from the January 3rd edition of *Business Week Online*, discussing the sharp decline in television prices contains the following statement:

“What’s behind the steep drop in prices? Strong consumer demand for low-end plasmas and LCDs give the decline healthy momentum, and aggressive pricing by Chinese and Taiwanese manufacturers only go further in shredding margins and creating a ruthlessly competitive environment for TV manufacturer. “I don’t think anybody is making any money other than the retailers, really” says (Riddhi) Patel (analyst with ISuppli).”

The financial services company S&P makes a similar conclusion:

“At this point in the cycle, we see declines in average selling prices, which we think are hurting manufacturers, helping to drive demand and benefiting retail sales.” “Best Buy Stock Report” by Marie Driscoll, S&P, October 14, 2006.

The financial services company, Morningstar, in a recently published book, "The Five Rules for Successful Stock Investing," says that "Falling in Love with Products" is one of the five mistakes investors make.

"...Consumer electronics is simply not an attractive business. Margins are thin, competition is intense, and it's very tough to make a consistent profit."

Gartner says that the consumer electronics industry will follow the PC industry with, “Lower costs, combined with ongoing price pressures, resulted in lower gross margins.”

Peter Burrows and Steve Hamm in “Tech Has a New Top Dog,” Business Week Online, June 19, 2006, note, “Consumer tech? Margins can be razor thin or nonexistent.”

The October 18, 2005 Merrill Lynch analysis of Philips Electronics repeatedly discusses the “total lack of operating leverage in Mainstream Consumer Electronics.”

And as we approach the 2006 Christmas season, the economic situation appears to be even worse. In the October 4, 2006 Business Week Online, Arik Hesseldahl writes in “Big-TV Battle: LCD vs. Plasma” that “Dropping prices on large-screen sets means viewing pleasure for consumers who buy early – and thin margins for manufacturers.”

Hesseldahl starts out the article as follows:

“Christmas is coming, and that means war.

“The battlefield? Your local consumer electronics retailer. The combatants? The companies that manufacture LCD and plasma screen TVs. **The stakes? Bragging rights, maybe—because at least in the near term, there aren't going to be many profits.**

**"CATCHING UP."** "The only ones making money in the TV business this year will be the guys who deliver the sets and the people who sell the stands and the mounting brackets," says analyst Rosemary Abowd of Pacific Media Associates in Menlo Park, Calif.

“The imminent price war will pit so-called liquid-crystal display (LCD) screens against plasma screens, with consumers reaping the primary benefit. For the first time, LCD TVs in sizes above 40 inches are priced competitively and in some cases far lower than plasma screens in the same size. And sales volume for both types is expected to surge this year. **That augurs a market where buyers will have a lot of choice and vendors race to undercut each other.**”

A similar picture is painted by Smartmoney.com, published by the editors of the Wall Street Journal in the November 22, 2006 story, “Big-Picture Potential” by Nicole Ridgway. “The market is crowded with companies that are far from household names. Patel has counted at least 90 HDTV outfits from across the globe. Many of them are privately held. *Investors also need to keep in mind that furious price competition from the consumer electronics behemoths Sony, Hitachi and Samsung has the makers of these sets squeezing profit margins to dangerous levels.* A company’s sales growth may look phenomenal in the quarters ahead, but the bottom line could dramatically disappoint. “The manufacturers shake their heads when they talk about the situation,” says Ross Young, president of DisplaySearch, a display market research outfit.”

The evidence discussed above clearly shows that the consumer electronics industry is very competitive and manufacturers have very low operating margins (the percentage of profit before interest and taxes from each dollar of sales). Low margins are either the result of manufacturers not being able to raise prices or having high operating costs.

It is clear that manufacturers cannot simply raise their prices. If they could raise prices why wouldn't they price their products to have high margins leading to higher profits? Retailers require manufacturers to price products to achieve certain price points making raising prices difficult leading to these “razor thin margins.” And if manufacturers could simply pass on the costs of the fee, why would virtually all consumer electronics manufacturers oppose an approach based on manufacturer responsibility or a manufacturer fee?

Available evidence shows significant cost cutting by consumer electronics manufacturers. For example, the August 14, 2006 edition of Forbes, says the following in the story “Move Into the Light: “...Philips (USA) slashed redundant products, severed ties with unprofitable retail customers and upped the company’s exposure to the hot flat-panel-screen business...came up with its share of the \$450 million in operating costs cut from Philips’ worldwide consumer electronics business.” A second story documents significant job cuts and very low employment levels. “About 113 jobs were eliminated in 2003 and further cuts pared the staff to its current level of about 250.” “A Turn-Around Story,” Atlanta Journal Constitution, March 16, 2006

Since manufacturers cannot simply raise prices and have significantly cut costs, they have very low operating margins.

d. *As a result of this competition and pricing pressure, consumer electronics is not a very profitable business.*

A July 18, 2006 analysis of Philips Electronics by Merrill Lynch values the consumer electronics business at \$0.

"We value the mainstream business at zero as we believe that the CE industry is intensely competitive and value creation is challenging."

Morningstar's most recent financial analysis of Philips (April 18, 2006) says the following:

"Philips' consumer electronics business recorded 15% revenue growth, but operating margins remained anemic at 2.5% underlying the difficulty in making money in this highly contested market. We are especially concerned that profitability in this segment could deteriorate further, as overcapacity in the flat-panel industry could turn Philips thin profits into losses."

The situation for Philips is even more serious in the US.

"Philips...has for the first time in 15 years posted a profit in the North American consumer electronics business. It's a small profit...according to Sanford Bernstein analyst Scott Geels... Credit a heightened sense of urgency. In 2001 Philips Chief Executive Gerard Kleisterlee told a reporter that if Philips couldn't make a profit in North American consumer electronics within a few years he would shut it down" "Moving into Light," [Forbes.com](http://Forbes.com), from [Forbes](http://Forbes) magazine August 14, 2006.

The July 18, 2006 Merrill Lynch analysis says that Philips Electronics is doing better than other electronics companies.

"...We think Philips is performing reasonably well compared to its competitors...The mainstream business was only just above breakeven due to the price discounting from competitors to clear their inventory...Samsung reports a Q2 margin of -4% in its Digital Media business (c. 70% of sales are TV and A/V, the remainder is PC/printers) despite increasing its flat panel market share to become the #1 player in the US and EU."

A September 15, 2006 Merrill Lynch report on Philips reiterates this point:

"Recent results illustrate that the Business Renewal Program has been a success. Philips exceeded its 400 million Euro cost savings target and the division is profitable whilst competitors such as Sony (lost Yen 11 billion in TVs last quarter), Samsung and LG continue to struggle."

A July 27, 2006 Merrill Lynch analysis of Sony says that "LCDs still posted an operating loss" (in the latest quarter).

These same pressures are affecting manufacturers of plasma televisions. "Profitability has been challenging for the majority of the PDP makers, despite rising consumer uptake of

plasma TV sets. "LG Reclaims Top Plasma Panel Rank, I Suppli Says," Electronic Business Online, 6/29/2006

These pricing pressures only worsened in 2006. According to Merrill Lynch, the average price of a flat panel television dropped 36% in 2006. "What We See in CE – 01/08 – 2007 Off to a Slow Start," January 8, 2007. Tiernan Ray of Barron's Magazine expects more of the same, "The bad news for manufacturers, and, I suppose, for Best Buy and Circuit City, which got whacked this holiday on falling prices, is that prices will decline another 30-37 percent for the 40 inch and higher models by the fourth quarter of next year. "iSuppli: More LCD Pain on the Way," post on December 27, 2006 on Seekingalpha.com. A December 23, 2006 article in the Boston Globe, "A prime time to buy high-tech TVs," comes to a similar conclusion:

"Aggressive price wars over flat-panel televisions...have given shoppers the upper hand this holiday season. Merchants have slashed prices 40% on average over the past year... 'Prices are dropping faster than TVs are growing in terms of screen size,' said Scott Erickson, a partner in Deloitte & Touche's consumer business practice... Prudential Equity Group analyst Mark J. Rowen wrote in a recent report (December 21, 2006), 'We believe the competitive environment will only become more intense next year.'"

A research note from Daniel Kim of Merrill Lynch, "Takeaways from 2007 CES," (January 11, 2007), shows the impact that this pricing is having on profits:

"We note that impressive flat panel TV sales were a result of brutal price erosion in large-size TV sets. This sounds good, as there would be limited inventory leftover from the previous holiday season. However, we believe it is too early to get excited about the flat panel stocks in Asia, as earnings improvements would be limited, owing to lower pricing, below the cost level."

Overwhelming evidence demonstrates that manufacturers do not have the ability to absorb additional costs that would be imposed by a fee on manufacturers or by a producer responsibility approach.

*e. Manufacturer Fee/Producer Responsibility Bills Put Established Manufacturers Who Are The Companies Leading the Development of Environmental Improvements At Economic Disadvantage.*

Producer responsibility/manufacturer fee proposals unfairly and unnecessarily put established manufacturers at an economic disadvantage to new Asian entrants by adding costs to these manufacturers when they already have higher costs and lower profit margins. Established manufacturers are the manufacturers making the environmental design improvements that legislators want to see. These research and design implementation initiatives add to established manufacturer costs.

Established manufacturers are widely recognized for being innovation leaders (See April 24, 2006 Business Week in which Coalition member Sony is included in the list of the world's 25 most innovative companies. Three other Coalition members, Philips, Panasonic and LG Electronics, made the top 100 most innovative companies.

As noted above, established manufacturers are also recognized as being leaders by independent third parties as leaders in sustainable business.

While purporting to provide incentives for better environmental design, a manufacturer fee or manufacturer responsibility approach provides no such incentive and ironically provides a disincentive by harming the established manufacturers who are the leaders in environmental design improvements.

4. *Other regulatory and voluntary programs already encourage the development of more energy efficient and environmentally preferable products.*

There are numerous voluntary and regulatory programs that encourage or require the development on environmentally preferable products. These include:

- European ROHS Directive on lead, mercury, cadmium and hexavalent chromium that has been adopted for video screen products such as televisions and computer screens by California as of January 1, 2007
- California electronics recycling reporting requirements on use of toxics and recycled material.
- Government procurement preferences for environmentally preferable products (EPEAT for computers --- [www.epeat.net](http://www.epeat.net))
- Energy Star specification for standby mode for televisions ([www.energystar.gov](http://www.energystar.gov)) adopted as a requirement by California Energy Commission as of January 1, 2006.
- Energy Star initiative to develop specification for active mode (EPA Energy Star press release).
- Natural drive to lower energy consumption because of thermal management, product-design requirements and improvements in components functions. Reducing energy use allows for dissipation of heat buildup with less reliance on fans. This also allows for the design of thinner products, which are desired by consumers. Component suppliers offering more functionality onto each component making for better efficiency.

It is undeniable that products today contain significantly less toxic materials, are much more energy efficient and are lighter than products made more than a decade ago.

5. *The California ARF system for electronics waste has been a significant success.*

According to Jeff Hunt, supervisor of the California program, predictions of daunting administrative problems have been largely incorrect "and the program as a whole has been a tremendous success in both recycling and driving the creation of local businesses and jobs." (Milken Institute 2006 Global Conference report,

[http://smartbrief.blogspot.com/2006/04/e-waste-tsunami\\_24.html](http://smartbrief.blogspot.com/2006/04/e-waste-tsunami_24.html)). Electronics recyclers have also praised the program (“E-Waste Business is Booming,” [Red Herring.com](#), August 10, 2006).

441 collectors and 48 recyclers have registered with California as participating in the program. One retailer, Save Mart Supermarkets, one of the largest grocery stores chains in California, has registered as a collector and collected over 250,000 pounds of material at six stores in one weekend (Business Wire August 10, 2006).

During its first year of operation California recyclers submitted claims for reimbursement for 64 million pounds of covered products or almost 2 pounds per person. But results are actually more impressive. Collections increased throughout the year with the fourth quarter of 2005 resulting in collections of 25 million pounds. Collections over the first half of 2006 were 54 million pounds, and California projects that it will recover 129 million pounds in 2006. California officials had predicted that collections would double in 2006 making California the jurisdiction with the highest per capita recovery rate of any state and they appear to be on track to achieve this goal. (Milken Institute 2006 Global Conference report, [http://smartbrief.blogspot.com/2006/04/e-waste-tsunami\\_24.html](http://smartbrief.blogspot.com/2006/04/e-waste-tsunami_24.html)).

Even this figure understates true collections since California only reimburses recyclers for covered products – video screens. It does not reimburse recyclers for other electronic waste such as computers, printers, scanners, keyboards, and mice that are also recovered from consumers and recycled. While there is no official data at this time of these non covered products anecdotal evidence suggests that actual collections are 50-100% higher than the official results of collections from covered products. This is confirmed by Electronics Recyclers, the largest electronics recycler in California. According to a newspaper article, Electronics Recyclers operates 36% of the state’s recycled electronics market (<http://www.fresnobee.com/business/story/12781983p-13474448c.html>). The company says that actual collections including non-reimbursable equipment are nearly 67% higher for the first half of 2006 than reported collections. With California collecting covered products for 2006 at a rate of 129 million pounds, and using the Electronics Recycling estimate for non-covered product collection (another 88 million pounds), total recovery would be about 215 million pounds or 6 pounds per person.

To put this in some context, the US EPA says that existing collection programs recover 1-3 pounds of electronics per person. “Electronics Waste Management in the US,” Clair Lindsay, US EPA presented at E Scrap 2006, October 18, 2006. According to Maine officials, Maine, which uses a partial producer responsibility model, will recover 1 pound per person in its first year of operation in 2006. “Maine’s E-Waste Law: Is It Working,” Carole Cifrino, Maine DEP, presented at E Scrap 2006, October 18, 2006.

The California program has resulted in additional public benefit. Goodwill has made collection a profit center in California and Goodwill testified in support of ARF at Congressional hearing.

<http://energycommerce.house.gov/108/Hearings/09082005hearing1631/Davis.pdf> (See pages 9-10)

6. *Arguments against ARFs are not justified*

The following arguments have been raised against ARFs. None of them are justified.

- The bill places an administrative burden on retailers that will increase their costs.

The California bill allows retailers to retain 3% of the fee to help cover their costs. The bill allows retailers to keep any interest on the fees until they submit the fees every quarter. The California Board of Equalization says it has received few if any complaints from retailers (National Center for Electronic Recycling, August 2006). National retailers already have made the necessary changes to implement the California ARF system and would have little or no additional cost to add fees in other states. Retailers in 45 states already collect state sales taxes and remit them to the state without any reimbursement. Retailers in all 50 states already collect state taxes on gasoline, beer and cigarettes and remit them to the state and retailers in all states except where the state government controls all sales collect taxes on wine and spirits and remits them to the state. Retailers in ten states collect and remit bottle bill fees to the state, in nine states collect and remit fees on lead acid batteries and in 34 states collect and remit fees on tires all for funding collection efforts for those products.

In its 2006 annual report, Costco made the following statement:

“Certain state laws require that we apply minimum markups to our selling prices for specific goods, such as tobacco products, alcoholic beverages, and gasoline. While compliance with such laws may cause us to charge somewhat higher prices that we otherwise would charge, other retailers are also typically governed by the same restrictions, and we believe that compliance with such laws does not have a material adverse effect on our operations.” (Page 11)

Ironically, when faced with the possibility of a manufacturer fee in Canada, the Retail Council of Canada opposed such a fee because of the adverse affects on large and small retailers. “Environmental Levies,” Retail Council of Canada. At least one large grocery retailer in California, Save Mart Supermarkets, has registered as a collector of electronic waste and is holding collection events at its stores.

The Alberta Recycling Management Authority, in its 2005-2006 Annual Report, also reports no problems in the collection of the “first sale” fee in the province. “On the revenue side, the collection of the environmental fee on the sale of TVs and computers has been very effective, and revenues have been higher than projected for the start-up year. Over 90% of eligible products are sold by major retailers, commercial distributors and manufacturers including Internet sellers who have collectively been responsive in setting up their systems to meet their remittance responsibilities.” (Page 23)

- The bill will result in a huge government bureaucracy and be inefficient.

The funding mechanism, the advance fee, is independent of the structure for implementing the recycling program. The mechanism can be implemented without establishing a huge government bureaucracy. While some argue that California's program is overly bureaucratic, data shows that the administrative costs to run the recycling program are low (~ 10% of collected fees according to the National Center for Electronics Recycling, August 2006) and at or below overhead costs in Maine on a per capita basis. Moreover, states could transfer payments to local governments to implement the program avoiding any state bureaucracy. North Carolina has proposed such a system and says it can operate such a system with just three additional people. States also could outsource the management of the program to a third party. Manufacturers have said they would run the program based on ARF funding. Capping fees would also limit the likelihood of creation of a government bureaucracy.

In a survey of electronics processors in California, Maine and Alberta Canada, the three jurisdictions with up and running electronics recycling programs, conducted by E-Scrap News, all the California processors felt that the California program would serve as a good national model, while Maine processors felt that its program would not serve as a good national model. "How Does Being a Processor in a Regulated Program Measure Up? Presented at E Scrap 2006, October 18, 2006.

- The bill will result in local retailers losing sales to Internet sites that will not have to pay the fee.

The California experience is that all major Internet retailers are collecting the fee. The California DTSC report specifically says that the "Board of Estimate believes the majority of Internet and catalogue retailers are participating in the California e-waste recycling program by remitting the fee." Projected revenues from collected fees in California are coming in on target strongly suggesting that there has not been a loss of sales to Internet retailers. California officials also report that the top ten 2005 computer and electronic internet retailers, as identified by Internet Retailer comprising over 90% of such internet sales, all are participating in the California program (National Center for Electronics Recycling Trip Report, August 3-4, 2006).

The California program also prohibits any electronic product seller not collecting the fee to be ineligible for state government procurement. Surveys show that while consumers heavily use the Internet to research and shop for products, most people make their purchases at retail stores and half of online buyers pick up products at local stores. "Using the Small Screen to Find Bigger Ones," eMarketer, July 11, 2006.

Manufacturers further suggest including in the bill language to prohibit sales of their products in the state unless the manufacturers include in their contract language the requirement that internet sellers collect and forward the advance recovery fee to the state providing a legal mechanism, a contract violation, to stop Internet retailers who are not collecting the ARF.

- The bill does not provide an incentive to manufacturers to improve their environmental design.

Established manufacturers are widely recognized for being innovation leaders (See April 24, 2006 Business Week in which 4 Coalition members made the list of the top 100 most innovative companies). Manufacturers already have significantly improved design by making products much more energy efficient and significantly reducing use of toxics and packaging.

The alternative proposed by the retailers actually provides a disincentive to environmental design by increasing costs of the manufacturers leading environmental design efforts to the benefit of new low-cost manufacturers without any record of environmental design improvements who will not have any costs until their products show up in the waste stream in a decade.

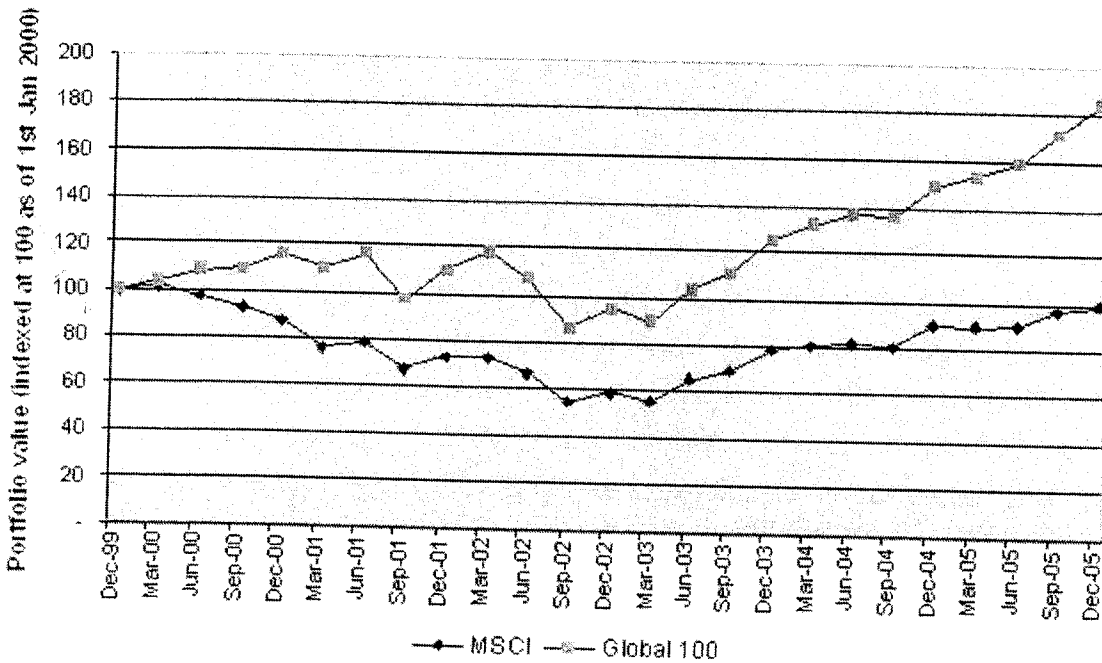
#### 7. *Conclusion*

*States should adopt an advance-recycling fee on electronics to provide funding for their electronics-recycling program.*



**Performance Chart**

This chart shows the relative performance of the 2006 Global 100 companies back-tested against the MSCI World Index (2000-2005).



**Outperformance Results**

	MSCI World	2006 Global 100	Outperformance
1 year	10%	23%	13.46%
3 year	19%	25%	5.47%
5 year	3%	10%	7.11%

Toby Heaps, co-Founder and Editor of Corporate Knights magazine, says that "Increased environmental scrutiny and regulatory action are opening the floodgates for trillions of dollars of investment capital to flow into companies with a green edge, and the G100 are well-placed to surf this long-wave."

**About G100**

The Global 100 Most Sustainable Corporations in the World is a project initiated by Corporate Knights Inc. with Innovest Strategic Value Advisors Inc., a leading research firm specializing in analyzing extra-financial drivers of risk and shareholder value, including companies' performance on social, environmental and strategic governance issues.

Click here for more on the Global 100

38x



February 8, 2007

Honorable Bob Smith  
Chair  
Senate Environment Committee

**SUPPORT FOR Substitute SB 554**

Dear Chairman Smith and Members of the Committee,

On behalf of Sharp Electronics which has its North America Headquarters Office located in Mahwah, I would like to offer our strong support of the substitute language for Substitute SB554, the Electronic Waste Management Act.

By establishing a sustainable source of funding that an advance recycling fee provides, New Jersey can 1) ensure all its residents have free and convenient access to recycling, and 2) that video display devices and computers are properly managed and kept out of state landfills.

**Advantages of Substitute SB 554**

The upfront financing mechanism provided by Substitute SB 554 creates a simple, straight forward process to give ultimately counties and municipalities sufficient funding to pay for the recycling of covered electronic devices.

Further, Substitute SB 554 would build upon the success of the California electronics recycling program by creating full funding for local waste collection and eliminating inefficiencies incumbent in other waste collection schemes that require expensive sorting and managing by brand.

Substitute SB 554 also embodies the concept of shared responsibility among all parties including manufacturers, government, retailers, recyclers, and consumers. By ensuring every party in the chain of commerce plays a meaningful role, this legislation will encourage greater recycling of electronics at their end of life and help keep these products out of New Jersey landfills.

As an electronics manufacturer with a substantial presence in the state, I urge your support of Substitute SB 554.

Sincerely,

Sincerely,  
Sharp Electronics Corporation

Frank Marella  
Manager Corporate Environmental Affairs

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TESTIMONY OF SHARP ELECTRONICS OF BEHALF OF THE ELECTRONIC  
MANUFACTURERS COALITION FOR RESPONSIBLE RECYCLING  
SB 554 on ELECTRONICS PRODUCTS RECYCLING  
SENATE COMMITTEE ON ENVIRONMENT  
February 8, 2007

The following are the comments submitted by the Electronics Manufacturers Coalition for Responsible Recycling. The members listed below include major manufacturers of televisions, computers, and laptops.

Canon USA  
Epson  
Hitachi America  
JVC America  
Pioneer

LG Electronics  
Mitsubishi Digital Electronics America  
Panasonic  
Philips Consumer Electronics North America

Sanyo Fisher  
Sharp Electronics  
Sony Electronics  
Thomson Inc.  
Toshiba

Mr. Chairman and members of the Committee, Sharp Electronics Corporation, speaking on behalf of the Electronics Manufacturers Coalition for Responsible Recycling as well as Sharp is testifying to support the bill as amended.

#### Background

Sharp Electronics is a global manufacturer of electronic products and appliances for both the home and office. Sharp is the world's largest manufacturer of LCD Televisions and solar panels. Sharp's solar technology is providing electric power to the Educational Information and Resource Center (EIRC) located in Sewell, New Jersey as well as several schools in the state. Sharp was a proud sponsor and supporter of the first pilot project involving the recycling of electronic products that took place in Union County in the mid-1990's. Sharp has also sponsored recycling events in the state, most recently in September and October in conjunction with several partners including JVC, Panasonic and Toshiba.

Sharp Electronics is also participating in the industry-sponsored Consumer Education Initiative at [www.eiae.org](http://www.eiae.org), a web-based recycling information system that helps consumers locate recycling programs for end-of-life electronic products.

#### Position

Sharp Electronics and the Coalition support SB 554 as modified. We put this question to the Committee and the public: *When has a regulated industry ever requested that another state adopt a California environmental law to regulate it?* The California system, which this bill is modeled on, has proven, in 2 years, to be the most successful recycling program in the nation. While there may be people who oppose this bill, the one thing that they cannot deny is the success of the California system.

The California system has achieved an incredible recycling rate of over 4 pounds per capita in less than 2 years of operation. It has done so under budget and with administration costs of 11%, significantly less than the 20% predicted by the state. We believe that the California system, as described in SB 554, has significant advantages:

1. It is a tested system that treats all manufacturers equally. The fee is based on product size, not use, which can be unclear
2. It funds the entire system up-front rather than depending on a sell now, pay back later scenario, which AB 3572 does.
3. It ensures that the consumers pay a fixed, known cost rather than one that is hidden from the consumer and marked up along the distribution chain. Under AB 3572, the same \$10 cost a consumer would pay as an Advanced Fee at retail, if included in the manufacturers wholesale costs as envisioned in AB 3572, would be \$15 or more by the time it appeared buried in the retail price of the product. None of that additional revenue would go to aid the recycling system. It would only go to lining the pockets of everyone in the distribution chain.
4. Consumers do not have to look at their product and the product brand to determine how to recycle it, which they would have to do under AB 3572
5. The program allows the free market to grow to develop the collection and recycling systems, rather than creating a collection/recycler monopoly as the Maine program does, and AB 3572 would do.
6. The program will create in-state jobs, as it did in California, where there are now over 450 authorized collectors and recyclers, as opposed to in Maine, where the 2 largest collectors and recyclers are based out of state.
7. This system does not discriminate between technologies, especially important as the TV and IT technologies continue to move towards merger.
8. Fee collection in California has been in line with projections, with the top 10 Internet sellers collecting and remitting the fee to the state, and 20 of the top 32 in compliance.
9. Everyone, including retailers, receives compensation commiserate to their roles in the program.
10. It ensures that all covered products are processed in accordance with sound, environmental, health, and safety standards.

It is also important to note that the environmental design concerns identified by many have been addressed effectively and in a manner that does not restrict design, by the California approach. In California, manufacturers must eliminate the use of heavy metals in a manner that is consistent with Europe and other markets and must submit an annual report on the environmental design activities. Both of these requirements allow market forces to achieve the legislative goals without stifling product innovation and design. New Jersey receives the benefits of this regulation without having to enact any regulation.

We understand that there have been criticisms of the California program and we concede that it is not perfect. However, the basics of the system are sound. Fees are being collected from all sellers including remote seller, products are being collected and processed, all retailers, collectors, transporters and recyclers are being compensated for their activities in the system, and the program is supported by consumers, environmental groups such as Californians Against Waste, recyclers, and local governments. In short it is a success and we believe it is one that can be and should be repeated in New Jersey.

We do not understand how some groups, who were on the record as supporting the California program in the legislature, can now oppose the very same proposal in light of its success. The members of the Coalition are ready to work with this committee to ensure that SB 554 becomes law in New Jersey. Thank you for your time and I would be pleased to answer any questions that you may have.

GOVERNMENT AFFAIRS TEAM

Melanie Willoughby  
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**TO: Members of the Senate Environment Committee**

**FROM: David Brogan, Vice President of Environmental Policy**

**DATE: February 6, 2007**

**RE: Senate Environment Committee Hearing on Electronic Waste**

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The Senate Environment Committee hearing on February 8, 2007, will be a forum to discuss two competing programs for the collection, transport and recycling of electronic waste. Below, I have outlined our concerns with a "producer pays" model. I have also attempted to demonstrate the benefits of utilizing New Jersey's existing infrastructure for the collection and transport of this material. On behalf of the New Jersey Business and Industry Association (NJBIA), which represents over 23,000 businesses in the State of New Jersey, I would urge the committee to consider the success of the California (CA) e-waste program as a model for New Jersey.

An advanced recovery fee (ARF) approach charges a fee at the point of sale, and that fee is used by the state to finance an electronic waste (e-waste) management program. The ARF program is beneficial because it provides a transparent system of financing, coupled with reinforced education. Just as New Jerseyans already pay fees for the proper disposal of tires and motor oil, an ARF would be similar for e-waste.

A "producer pays" model generally charges manufacturers an annual fee, and also requires manufacturers to develop, finance and implement a program to recycle their share of waste that is returned. This share, in most cases, is determined by the portion of their brand that is returned, plus an allocation of old products for which the brand no longer exists, commonly referred to as orphan waste. This type of program has been implemented in Maine.

**In both approaches, the consumer ultimately pays for the cost of recycling. In the former approach, this cost is visible. In the latter model, it is internalized in the product price.**

NJBIA has the following concerns with a producer pays approach:

- 1) **It creates a patchwork of programs which will inhibit public participation.** Clearly, the goal of any e-waste program initiated by the State is to obtain the greatest amount of public participation, which in turn, will result in the greatest amount of e-waste collected and recycled. When Maine instituted their program and required "manufacturers" to submit plans for e-waste management, they received over 200 plans. A producer pays model creates a patchwork of varying programs throughout the state which will only add confusion to consumers.

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- 2) **The producer pays model creates an uneven playing field for new entrants to the market.** As stated above, a producer's "share" is in most cases, determined by the portion of their brand that is returned, plus an allocation of old products for which the brand no longer exists, commonly referred to as orphan waste. Since televisions, on average, last about 17 years and computer monitors last about 11 years, established manufacturers will have take-back costs while a majority of new market entrants will have no take-back costs since their products are simply too new to end up being recycled. This creates a competitive disadvantage for those companies that have called New Jersey home for decades.
- 3) **A producer pays model completely disregards New Jersey's existing infrastructure for the collection and transport of recyclables.** In Maine, a producer pays model seems to work, in part, because of the remoteness of housing and collection points. New Jersey, on the other hand, has a comprehensive system whereby counties develop solid waste and recycling plans and municipalities implement those plans. New Jersey citizens are used to having recyclables collected on certain days, and they understand the benefits of such programs through educational components implemented by both the State and the counties. **If the infrastructure already exists in New Jersey, why would we create a whole new system simply for the management of e-waste? This seems counterintuitive.**
- 4) **A producer pays model negatively impacts small mom and pop operations.** As an example, A-3572 in the General Assembly, requires all manufacturers to pay an annual \$5,000 fee, plus an additional fee to develop and implement a recycling plan. There are small manufacturers that sell computers at computer fairs. They usually only have a couple of employees and operate on a shoestring budget. A \$5000 annual fee, plus an additional fee would be onerous additional costs.

Just as I have tried to illustrate above, if New Jersey is contemplating a program similar to one that has been implemented in Maine, we should look at the similarities and/or differences between the states.

- Maine has 1/7<sup>th</sup> the population of New Jersey.
- Maine does not have a similar infrastructure for collection and disposal of solid waste.
- Maine's Department of Environmental Protection is 1/10<sup>th</sup> the size of New Jersey's DEP and does not have the ability to regulate industry in the same manner as New Jersey.
- Unlike New Jersey, a patchwork of programs throughout the state of Maine has little impact due to the remoteness of collection points.
- Finally, it should be noted that municipalities in Maine are still charging a fee for the collection of e-waste material, even though manufacturers are paying for the transportation and disposal of the e-waste.

NJBIA strongly urges the committee to consider the CA e-waste program in lieu of the aforementioned producer pays model. The CA advanced recovery fee program is extremely successful. Furthermore, given that CA and NJ have a similar infrastructure for the collection and disposal of waste and recyclable material, it makes sense to contemplate a similar program. Some of the highlights of the CA program include the following:

- 1) In 2005, CA recycled 65,000,000 lbs of e-waste;
- 2) In 2006, with data through November, CA recycled over 100,000,000 lbs of e-waste;
- 3) The CA program is currently revenue positive;
- 4) CA has licensed 500 approved collectors of e-waste and over 50 new recycling companies.

CA has successfully educated the public; created a transparent program that makes it easy for the public to participate in; assisted in the creation of a new industry; and successfully collected and recycled millions of pounds of e-waste over the past two years.

Once again, on behalf of the NJBIA, I would urge the committee to support an Advanced Recovery Fee model for the appropriate recycling of e-waste in New Jersey. Given the similarities between CA and NJ, it is clear that an advanced recovery fee model would be successful in our State.

I appreciate your consideration of our position. Should you have any questions or need further information, please contact me at 609-393-7707, extension 236.

c. Kevil Duhon, Senate Democrat Office  
John Hutchison, Senate Republican Office  
Judith Horowitz, Office of Legislative Services

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February 8, 2007

Honorable Bob Smith  
Chair  
Senate Environment Committee

## **SUPPORT FOR Substitute SB 554**

Dear Chairman Smith:

On behalf of Panasonic Corporation of North America which has its North America Headquarters Office located in Secaucus, New Jersey, I would like to offer our strong support for the new substitute language for Substitute SB554, the Electronic Waste Management Act. Panasonic also has facilities in Denville, Moorestown, New Providence, Princeton and West Hampton. Collectively, we employ nearly 2,000 persons across the state.

### Advantages of Substitute SB 554

By establishing a sustainable source of funding that an advance recycling fee provides, New Jersey can ensure 1) all its residents have free and convenient access to recycling, and 2) that video display devices and computers are properly managed and kept out of state landfills.

The upfront financing mechanism provided by Substitute SB 554 creates a simple, straight forward process to give ultimately counties and municipalities sufficient funding to pay for the recycling of covered electronic devices.

Further, Substitute SB 554 would build upon the success of the California electronics recycling program by creating full funding for local waste collection and by eliminating inefficiencies incumbent in other waste collection schemes that require expensive sorting and managing by brand.

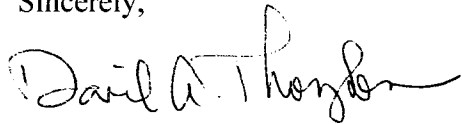
Substitute SB 554 also embodies the concept of shared responsibility among all parties including manufacturers, government, retailers, recyclers, and consumers. By ensuring every party in the chain of commerce plays a meaningful role, this legislation will encourage greater recycling of electronics at their end of life and help keep these products out of New Jersey landfills.

In a quickly changing, highly competitive industry, Panasonic has certainly done its share to help protect the environment through the design of eco conscious products. Panasonic, for example, has been recognized seven times by the US EPA ENERGY STAR Program for our leadership in energy efficient design. The US EPA Waste Wise Program chose Panasonic as the Electronics Recycling Challenge Partner of the year in 2002 for our work in recovering and reusing post-consumer Cathode Ray Tube (CRT) glass in the manufacturer of new TV picture tubes.

Late last year Panasonic announced yet another breakthrough in our commitment to responsible product design: The elimination of lead from plasma display panel glass. Panasonic is the first manufacturer to produce a display that does not use heavy metals such as cadmium, hexavalent chromium, lead or mercury. Several other manufacturers have already announced their intentions to introduce lead-free plasma displays later in 2007.

As we continue to address the issue of electronics recycling, Substitute SB 554 will help alert consumers to their responsibility while manufacturers continue in their efforts to design future products with a reduced environmental footprint. Accordingly, Panasonic is a strong supporter of Substitute Senate Bill 554 and urges your support.

Sincerely,

A handwritten signature in black ink that reads "David A. Thompson". The signature is written in a cursive style with a large, prominent initial "D".

David A. Thompson  
Director  
Corporate Environmental Department

February 8, 2007

The Honorable Bob Smith  
Chairman, New Jersey Senate Environment Committee

Senator Henry P. McNamara

Senator Stephen M. Sweeney

Senator John H. Adler

Senator Andrew R. Ciesla

**Re: SUPPORT FOR Substitute Senate Bill 554**

Dear Chairman Smith and Members of the Senate Environment Committee:

With nearly 125 engineering and intellectual property experts employed by Thomson in Princeton, we count on New Jersey and its superb reservoir of technical and legal talent to keep our technology and licensing businesses growing.

As the owner of the RCA brand, Thomson would like to offer our strong support for the language of Substitute SB554 -- the Electronic Waste Management Act. New Jersey can make certain that all of its residents have free and convenient access to electronic waste recycling and that video displays are properly managed and kept out of state landfills. This is possible with the creation of a sustainable source of funding that an Advance Recycling Fee provides.

If Substitute SB 554 becomes law, New Jersey cities and counties will have a simple process and sufficient funding to pay for recycling of covered electronic devices under the upfront financing mechanism provided by Substitute SB 554.

This proposed New Jersey statute would actually build on the success enjoyed by California's electronics recycling program by fully funding local waste collection and eliminating inefficiencies involved with other waste collection schemes. New Jersey would be spared from expensive sorting, counting, tabulation, reporting, billing, invoice distribution and fee collection, and dispute management of the "brand name" method of waste collection.



Thomson particularly endorses the concept of "shared responsibility" with all parties that is created with Substitute SB 554, involving device manufacturers, government, retailers, recyclers, and consumers. By ensuring that every element in the chain plays a meaningful role, this legislation will encourage greater recycling of electronics at end of life and also help to keep these old products out of the waste stream.

Sincerely,

A handwritten signature in black ink, appearing to read "D. H. Arland", with a long horizontal flourish extending to the right.

David H. Arland  
Vice President, Government Affairs

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The Perfect Experience / —

JVC AMERICAS CORP.

Honorable Bob Smith  
Chair  
Senate Environment Committee

February 7, 2007

**SUPPORT FOR Substitute SB 554**

Dear Chairman Smith:

On behalf of JVC Americas Corp. which has its North America Headquarters Office located in Wayne employing 300 NJ residents, I would like to offer our strong support of the substitute language for Substitute SB554, the Electronic Waste Management Act.

By establishing a sustainable source of funding that an advance recycling fee provides, New Jersey can 1) ensure all its residents have free and convenient access to recycling, and 2) that video display devices and computers are properly managed and kept out of state landfills.

Advantages of Substitute SB 554

The upfront financing mechanism provided by Substitute SB 554 creates a simple, straight forward process to give ultimately counties and municipalities sufficient funding to pay for the recycling of covered electronic devices.

Further, Substitute SB 554 would build upon the success of the California electronics recycling program by creating full funding for local waste collection and eliminating inefficiencies incumbent in other waste collection schemes that require expensive sorting and managing by brand.

Substitute SB 554 also embodies the concept of shared responsibility among all parties including manufacturers, government, retailers, recyclers, and consumers. By ensuring every party in the chain of commerce plays a meaningful role, this legislation will encourage greater recycling of electronics at their end of life and help keep these products out of New Jersey landfills.

As an electronics manufacturer with a substantial presence in the state, I urge your support of Substitute SB 554.

Sincerely,

Edward Nevins  
Manager, Environmental Affairs

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Hewlett-Packard Company  
8000 Foothills Blvd.  
Mail Stop RN  
Roseville, CA 95677

[www.hp.com](http://www.hp.com)

Testimony in support of Electronic Waste Recycling  
Producer Responsibility Model – A-35723  
February 7, 2007  
Presented by Lawrence King, Americas Product Take Back  
Hewlett-Packard Company

Good afternoon members of the committee, my name is Larry King and I am here to support A-3572 sponsored by Assemblymen Gusciora, McKeon, Barnes and Chivukula and to share HP's concerns with an advanced recovery fee model of e-waste recycling.

By way of background, HP is a global technology solutions provider to consumers, businesses, and institutions. HP's offerings span IT infrastructure, personal computing and access devices, global services, and imaging and printing. In addition, HP is a leader in the recycling of electronic devices in the United States and globally. According to a statement issued by the US EPA earlier this month, last year HP collected 164 million pounds of electronic waste globally and 64 million pounds in North, Central and South America.

In deciding who should be responsible for recycling discarded electronic devices, HP has consistently encouraged a manufacturer responsibility approach. This approach involves consumers, governments, retailers, and manufacturers in the electronic device recycling process. Based on HP's experience, we believe the manufacturer responsibility approach will result in a more effective, fair, and low cost solution for managing the recycling of electronic devices than the alternatives. HP Supports the manufacturer responsibility language as reflected in A-3572.

Manufacturer responsibility is not only the model HP supports, but is also the trend world-wide with countries in Asia, Europe and South America and in other states in the U.S. developing programs similar to New Jerseys.

Once enacted, HP and other manufacturers will be required to develop recycling plans by reaching out to recyclers, collectors and others to best suit the needs of New Jersey's consumers, the DEP and the State while also educating consumers about electronic waste recycling.

The ARF, on the other hand, is highly inefficient. In CA, it takes three different state agencies to administer the system: Integrated Waste Management Board (IWMB), Department of Toxic Substance Control (DTSC), and the Board of Equalization (BOE) the tax collecting agency for the state. It has been very difficult to get the exact cost the

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system has to these three agencies, but we have a rough idea. The BOE budget for the program was approximately \$6 million. Citizens of California are paying a significant amount of taxes for recycling electronic waste without seeing the benefits of significant recycling.

As you can see in the attached information from the US EPA, HP has set high standards of environmental stewardship and is looking forward to the opportunity to participate in a progressive e-waste program in New Jersey.



# Plug-In Update: 2006 Activities

[www.epa.gov/plugin](http://www.epa.gov/plugin)

## Partner Accomplishments

Plug-In to eCycling is a voluntary partnership between the U.S. Environmental Protection Agency and electronics manufacturers and retailers aimed at offering consumers more opportunities to donate or recycle their used electronics. Partners design and implement various approaches—either national or regional in scope—to give individuals eCycling options. Partners might offer online takeback or trade-in programs, create partnerships with local organizations to facilitate collections, host collection events at retail locations, and support local recycling events with cities and municipalities.

In 2006, Plug-In to eCycling partners collected more than 34 million pounds of electronics through their combined voluntary efforts. The energy conserved and greenhouse gas emissions prevented through these recycling efforts is equal to saving enough electricity to power more than 7,000 homes and taking approximately 12,000 cars off the road for a year. Since the program launched in 2003, partners collaborated to recycle over 95 million pounds.

Notable partner accomplishments for 2006 include:

**Best Buy** collected approximately 13 million pounds of CRTs, LCD and plasma TVs, and monitors from customer homes or through its services programs. Best Buy sponsored 40 collection events in local communities, recycling over 1.5 million additional pounds from 13,000 participants, thus doubling the number of events it supported in 2005. In March, Best Buy also assisted in Hurricane Katrina cleanup efforts by collecting and recycling over 220,000 pounds of damaged electronics. Since 2001, Best Buy has collected and recycled over 4,500,000 pounds from such events—held mainly in store parking

lots—and an additional 90,000 pounds of cell phones, inkjet cartridges, and rechargeable batteries from recycling fixtures located in the entryways of each Best Buy store.

**Cingular Wireless** collected almost 4.5 million phones—recycling more than 470,000 pounds of phones, accessories, and batteries through its recycler, Hobi International.<sup>1</sup> In addition, the company refurbished more than 4 million phones for resale through an authorized agent. In June 2006, Cingular launched its Reuse & Recycle Policy, requiring all 2,000 company-owned retail stores to participate in its mobile phone, PDA, battery, and accessory recycling program. Cingular's customer service Web portal now includes a store locator for consumers to search by city and ZIP Code for the closest Cingular store at which to recycle their used phones.

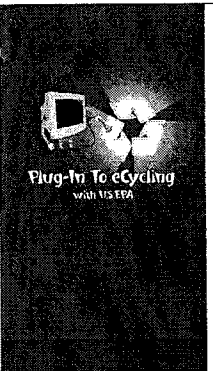
**Dell** recycled over 4.2 million pounds of electronics through innovative partnerships and collection events. Dell's program with Goodwill Industries—the Reconnect Alliance—collected more than 4 million pounds of equipment for reuse or recycling in five states. Through its partnership with the National Cristina Foundation, Dell offers consumers opportunities to donate computers. In September 2006, Dell introduced free online recycling, providing consumers with opportunities to recycle used Dell computers by downloading a shipping label from the company's Web site. In addition to these initiatives, Dell also hosted local events in Tennessee, Ohio, and Oklahoma, collecting more than 200,000 pounds of used electronics. By 2009, Dell aims to recover 275 million pounds of equipment from customers.

**eBay's Rethink initiative** educates consumers on why eCycling is important and provides them with information and options for donating or recycling electronics. In 2006, Rethink

<sup>1</sup> Cingular, with its recycling partner HOB International, Inc., promotes complete demanufacturing of cellular phones as a recycling service—instead of smelting the phone—to increase the resource recovery potential from the recycling process. Whereas most smelting processes recover less than 0.5 percent of valuable resources, de-manufacturing often generates recovery rates in excess of 80 percent



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generated 785,000 Web hits, educating more than 229,000 unique visitors on eCycling. Rethink members include Plug-In To eCycling partners **Best Buy, HP, Dell, Intel, Toshiba,** and **Apple.**

**HP** recycled more than 164 million pounds of electronics hardware and printing supplies globally in 2006, including approximately 64 million pounds from initiatives in North, Central, and South America. This represents an increase of 17 percent from 2005, and the company expects to meet its goal to recycle 1 billion pounds of hardware and print cartridges globally by the end of 2007. HP supports a number of ongoing collection opportunities for consumers including online recycling for computers and monitors. Through its buy-back, leasing, and trade-in programs, HP collected approximately 50 million pounds (more than 2.5 million computer units) for reuse. During the summer and fall 2006, it launched a Recycling Tour, holding 11 local collection events in Colorado, New Mexico, Connecticut, Oregon, Illinois, Maryland, California, and Minnesota. These localized recycling events reached more than 4,000 individuals and diverted more than 600,000 pounds of electronics from entering landfills. HP also developed and distributed "Get In The Technology Loop!" curricula through its partnership with Scholastic—the global children's publishing, education, and media company—to raise student awareness of environmental issues related to technology. HP expects these materials to reach 12 million students.

**Intel** sponsored and cosponsored 27 collection events in 10 states, recycling more than 1.5 million pounds of electronics, a 25 percent increase from 2005. A strong advocate of reuse, Intel supports Students Recycling Used Technology (StRUT) and is a leading member of **eBay's Rethink initiative.**

**Lexmark** recycled approximately 5.5 million pounds of electronics through its Equipment Collection Program and from equipment returned from customers.

**NEC Display Solutions** recycled more than 1 million pounds of electronics in the United States and more than 3.5 million pounds globally. NEC recycled more than 450,000

pounds of NEC-branded products through ongoing collection efforts and approximately 600,000 pounds of equipment through Total Trade, its trade-in program targeting corporations. In February 2006, NEC Display Solutions formed an alliance with Computers For Schools, through which NEC Display Solutions donated more than 450 computer displays.

**Office Depot** collected more than 60,000 pounds of electronics during its three-month in-store collection and mail-back pilot, where customers paid for recycling electronics at retail locations. Office Depot also collected more than 6,500 ink and laser cartridges for recycling through its ongoing in-store take-back program.

**Panasonic** co-sponsored 194 events in 29 states, recycling more than 4.2 million pounds of electronics. **Sharp, Sony, JVC, Philips,** and **Toshiba** supported many of the same events across the country, which collected and recycled more than 500,000 pounds of electronics. **Sony** recycled more than 36,000 pounds of its own branded products through participation in these voluntary collection events.<sup>2</sup> **Sony** also offers consumers coupons or store credit for trading in old notebook PCs through its online Notebook Trade-In Program. **Toshiba's** Trade-In program, where consumers receive credit toward a new purchase for trading in used products, also includes options for recycling if the product is considered obsolete. In addition to supporting domestic recycling, **Toshiba** recycled more than 25 million pounds of TVs and 468,000 pounds of computers globally.

**Staples** collected more than 1.6 million pounds of electronics in 93 of its stores in 15 states. Collection events ranging from one day to two weeks were held in Arizona, California, Colorado, Georgia, Illinois, Kentucky, Massachusetts, Montana, North Carolina, New Jersey, New York, Ohio, Oklahoma, Oregon, and Washington. Fourteen stores in the Seattle area currently offer ongoing fee-based collection for consumers throughout the year since they belong to the Pacific Northwest's Take It Back Network, a group of retailers, repair vendors, recyclers, and nonprofit groups that provide electronics collection and recycling services.

<sup>2</sup> In addition, Sony estimates that approximately 5.6 million pounds of Sony-branded products were recycled in California and over 200,000 pounds of Sony-branded products were recycled in Maine.

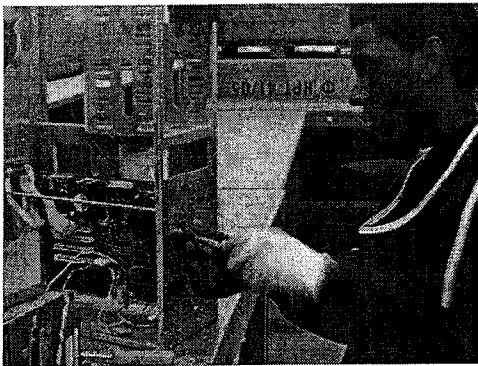
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## Dell Expands Reconnect Partnership with Goodwill Industries

Dell partnered with Goodwill Industries to create the Reconnect Alliance, an innovative and sustainable program that enables consumers to conveniently donate or recycled unwanted electronics. Consumers can bring their used electronics to a participating Goodwill store or donation drop-off site in five states at no cost for resale or recycling. Proceeds from resale value of donations are returned to Goodwill Industries to support its mission of creating job opportunities for individuals with barriers to employment. Through this program, individuals gain valuable, transferable job skills in dismantling or refurbishing computers. In cases where electronics are not resold, Dell assists in recycling them. Prior to this year, Reconnect launched in Central Texas, San Francisco, and the state of Michigan. In 2006, Dell and Goodwill expanded the Reconnect Alliance to San Diego, Pittsburgh, 23 counties in South Texas and 49 of 100 counties in North Carolina. All Reconnect programs, now locally available to an estimated 10 million U.S. households, collected over 4 million pounds of electronics in 2006. For more information, go to:

<[www.reconnectpartnership.com](http://www.reconnectpartnership.com)>

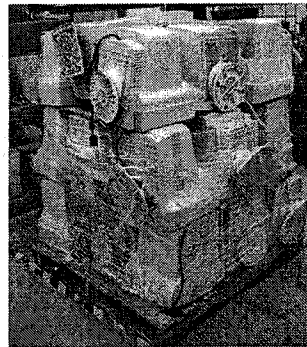


Dismantling computers at the Austin Goodwill

## Testing eCycling in Rural Communities

Consumers living near more urban and heavily populated regions in the United States often have more access to local eCycling opportunities than do those living in rural areas. High transportation costs due to a lack of nearby electronics recycling infrastructure can impede ongoing eCycling programs from taking root in rural communities.

In 2006, Montana's Department of Environmental Quality (DEQ) piloted its Rural Electronic Waste Recycling Program to provide the first series of electronics recycling opportunities to residents in communities throughout the state. These collection events recycled more than 330,000 pounds of electronics. Plug-In partners **Staples, JVC, Lexmark, Panasonic, Phillips, Sharp, Sony, Toshiba,** and **Best Buy** co-sponsored events in Helena, Missoula, and Butte and paid for the cost of recycling their brands. Results from this pilot project are helping Montana develop a voluntary electronics recycling program for the state.



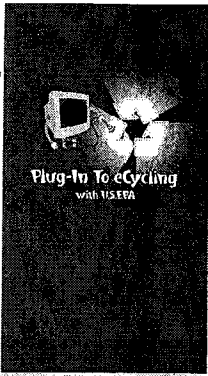
Moreover, Plug-In partners **JVC, Lexmark, Panasonic, Philips, Sharp, Sony,** and **Toshiba** supported collection events across West Virginia by paying for the recycling costs of their branded products. The events, organized by the National Center for Electronics Recycling through a grant from the West Virginia High Technology Consortium Foundation, collected and recycled more than 230,000 pounds of electronics. For more information, go to: <[www.electronicrecycling.org/NCER](http://www.electronicrecycling.org/NCER)>

## Testing Fee-Based Recycling

In October 2006, Plug-In partners **Panasonic, Sharp, Toshiba, JVC, Philips,** and **Samsung** provided financial support for a series of eCycling events in eight communities in Minnesota, administered by Waste Management. These events tested fee-based recycling, where consumers paid \$10-25 to recycle obsolete monitors and televisions; nearly 45,000 pounds were collected. Plug-In partners are planning more events for the spring of 2007 at additional sites throughout the state.



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## Pass It On!

Reuse benefits communities by giving others access to technology through donations and resale, and it conserves significant energy and resources otherwise used to manufacture new products.

## Benefits of Reuse vs. Recycling

In 2006, HP helped reuse approximately 2.5 million computers through its donation or resale channels. The energy and materials conserved are equal to saving enough electricity to power more than 560,000 U.S. homes, removing almost 400,000 cars from the road, and preventing more than 26 million metric tons of air emissions from being released each year. By contrast, recycling the same amount saves enough electricity to power 24,000 U.S. homes, removes almost 17,000 cars from the road, and prevents more than 1 million metric tons of air emissions from being released each year.

In 2006, EPA and its multi-stakeholder Plug-In To eCycling Reuse Working Group developed *Do the PC Thing*, a how-to fact sheet for consumers and businesses that addresses data security and sanitization, selecting donation recipients, and additional instructions for preparing one's computer for reuse. *Do the PC Thing* is available for download at: <[www.epa.gov/plugin](http://www.epa.gov/plugin)>.

## Pass It On Week

EPA and its Plug-In partners launched Pass It On Week, held April 16-23, 2006, to commemorate Earth Day, encouraging computer reuse and recycling in communities across the United States. As a result:

- Intel-sponsored events in Arizona, Colorado, Massachusetts, and New Jersey collected more than 420,000 pounds of electronics.
- Dell's Reconnect program collected more than 80,000 pounds of electronics in Michigan, Texas and California.

- HP recycled approximately 75,000 pounds from events for employees.
- Staples collected approximately 200,000 pounds from events held in Chicago.
- Best Buy and Toshiba teamed up to collect more than 50,000 pounds from two collection events at Best Buy stores in Southern California.

Plug-In's Reuse Working Group also developed 100 Percent Day, an initiative within Pass It On Week, to track collections on Earth Day. Through this effort, more than 60,000 PCs were collected.

## Reducing Environmental Impacts Through Greener Design

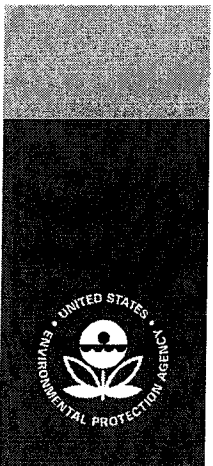
The EPA-funded Electronic Products Environmental Assessment Tool (EPEAT) launched this year to great success. EPEAT is designed to help large institutional purchasers identify and buy green computers, laptops, and monitors. Products that are EPEAT registered are made with fewer harmful materials, incorporate recycled content, contain less packaging, and may contain recycling options. Since July 2006, more than 300 desktop computers, laptops, and monitors—many of which are manufactured by Plug-In To eCycling partners—now bear the EPEAT label and are available in the marketplace. Other manufacturers are currently registering products and EPEAT is already referenced in almost \$42 billion worth of U.S. government computer contracts. EPA conservatively estimates that over the next five years, purchases of EPEAT computers will result in reductions of:

More than 13 million pounds of hazardous waste

More than 3 million pounds nonhazardous waste.

More than \$51 million in energy costs—saving enough to power 6 million homes.

Additional information is available at <[www.epeat.net](http://www.epeat.net)>



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**OUTLINE OF TESTIMONY**  
**MORGAN JOHNSON, SIMS HUGO NEU (SHN)**

1. **Electronics Recycling Requires a Funding Mechanism for Recycling and the Promotion of the Recycling Program:** Sims Hugo Neu's opinion is that any funding mechanism will effectively encourage electronics recycling. In 2006, the California e-recycling legislation (SB-20) resulted in an estimated 152.8 million pounds (1.2 million cubic yards) of electronics recycling. This is approximately 4.5 pounds of electronics per capita. Very effective.
2. **Electronics Recycling Benefits From Setting High Standards:** The California legislation appropriately sets standards, but the State did not have the benefit of industry Best Management Practices in shaping those standards. Sims Hugo Neu recommends that any New Jersey legislation set as the standard the Institute of Scrap Recycling Industries (ISRI) Electronics Recycling Operating Practices (first published in May 2006) (attached).
3. **Legislation Should Ensure That Funding Programs Align with Disposal Requirements in the State:** California's electronics waste disposal regulations are not tightly tied to the funding scheme established by SB-20 (E-Recycling Legislation). Subsequent to the introduction of SB-20, the waste disposal regulations were changed to prohibit the disposal of anything with a plug, while the scope of the funding mechanism in SB-20 remained unchanged. The result is that certain electronics are prohibited from disposal, are not funded under SB-20, and yet have not market value to recyclers. This has encouraged sham recycling of electronics.
4. **Legislation Should Minimize Administrative Requirements to the Extent Practicable:** SB-20 has extremely rigorous paperwork requirements that drive up the cost of the program. For example, in January 2007, SHN will be submitting an invoice for 1.2 million pounds of material. To get paid for that material, we will need to attach the name and address of about 24,000 residents to that invoice.
5. **A Mechanism Should Be Established to Set Capture Targets for Recycling and Recovery Efficiencies for Materials that are Captured:** SHN recommends that capture rate targets be set annually in the units of pounds recycled per capita. We also recommend that minimum recovery efficiencies be established for captured electronics (i.e., at least x% of a computer should be recycled). Recyclers would be required to achieve those minimum recovery efficiencies to receive funding under the program.

## ISRI Electronics Recycling Operating Practices

### I. Purpose<sup>1</sup>

*These voluntary electronic recycling practices are intended for those companies that seek to ensure that obsolete electronic products and materials (EPM) are e-recycled in compliance with all applicable environmental, health and safety regulations and in a manner that protects the global environment and the health and safety of workers in the United States and other countries.*

### II. General Requirements for E-Recyclers

- (a) Following all practicable efforts to refurbish and/or reuse EPMs, the balance should be manually e-dismantled for re-useable components and/or mechanically e-processed to produce recyclable commodities.
- (b) E-Recyclers shall only dispose of EPM that cannot be safely e-recycled.
- (c) E-Recyclers shall maintain commercial contracts or equivalent commercial arrangements for all transfers of EPM intended for e-recycling that should include:
  - (1) EPM quantity and type;
  - (2) Packaging requirements; and,
  - (3) E-recycling methods and specifications.
- (d) E-Recyclers shall maintain adequate business records for a minimum of three years, unless otherwise required by local, state, or federal law, including:
  - (1) Manifests;
  - (2) Bills of lading;
  - (3) Waste disposal records; and,
  - (4) Records that document the location, condition and disposition of EPM.

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<sup>1</sup> The scope of electronic products covered is defined in ISRI's Scrap Specifications Circular Guidelines for Electronics Scrap: ES-2005©.

- (e) E-Recyclers shall maintain and possess a written, work practice that specifically addresses, at least, the following:
- (1) Lead;
  - (2) Mercury;
  - (3) Beryllium;
  - (4) Cadmium;
  - (5) Batteries;
  - (6) Toner;
  - (7) Polychlorinated Biphenyls; and,
  - (8) Free flowing fluids such as oils, inks, and lubricants.
- (f) E-Recyclers shall possess Comprehensive or Commercial General Liability Insurance including coverage for bodily injury, property damage, complete operations and contractual liability with combined limits of not less than \$1,000,000 per occurrence, \$1,000,000 general aggregate.
- (g) E-Recyclers shall possess workers compensation coverage through either a state program or through a private insurance policy.
- (h) E-Recyclers shall ensure that EPM are stored and processed in a manner that minimizes the potential release of any hazardous substance into the environment.
- (i) All e-recycling facilities shall possess and maintain a documented Environmental, Health and Safety Management System (Management System).
- (1) All management systems must be capable of being audited to: a certifiable standard, such as the Recycling Industry Operating Standard (RIOS), ISO 14001, or an equivalent, in-house standard.
  - (2) All management systems must include a process:
    - (i) To improve environmental, health and safety performance.
      - (A) Provide regular documented health and safety training; and,
      - (B) Provide personal protection equipment.
    - (ii) To identify and comply with all applicable environmental, health & safety regulations.
    - (iii) For the evaluation and selection of downstream e-recyclers that assesses the environmental, health, and safety impacts on their operation.
    - (iv) To develop and implement risk management objectives for environmental and

health and safety performance and compliance.

- (v) To develop and implement plans for attaining these risk management objectives based on a plan-do-check-act for continual improvement.
- (vi) To conduct third-party audits to document and validate their environmental, health and safety objectives.
- (j) E-Recyclers must package all EPM designated for reuse in such a manner that protects against damage and minimizes the potential for releases of hazardous substances during storage and transportation. E-Recyclers must package all EPM designated for e-processing in such a manner that minimizes the potential for releases of hazardous substances during storage and transportation.
- (k) E-Recyclers shall not utilize governmental entities or contractors that are not subject to state and/or federal regulations governing wages, worker safety and environmental compliance, which are equivalent to those required of non-governmental entities.
- (l) The e-recycling facility shall have an adequate plan, including a financial mechanism, to prevent against abandonment of EPM. The plan shall be updated annually. The form of such financial mechanism shall be determined by agreement between the parties.

### **III. Manual E-Dismantling and Mechanical E-Processing**

- (a) Following all practicable efforts to refurbish and/or reuse EPM, the balance should be e-dismantled for useable components and/or commodities, or e-processed mechanically.
- (b) E-Recyclers shall have a written, up-to-date plan for responding to and reporting pollutant releases and safety incidents, including accidents, spills, fires, or explosions.
- (c) E-Recyclers shall have a process for exposure monitoring that includes:
  - (1) Compliance with OSHA standards for airborne contaminants such as lead and noise levels.
  - (2) Controls for exposure to lead, and other hazardous substances and noise through training, engineering controls, personal protection equipment, and/or modified work practices.
- (d) E-Recyclers shall possess pollution liability insurance or provide appropriate corporate assurances. Amounts shall be determined by applicable law or commercial agreements.
- (e) E-Recycling Facilities conducting EPM e-dismantling activities shall:
  - (1) Provide appropriate personal protection equipment (PPE) such as safety glasses, safety shoes, and gloves.

- (2) Provide job specific worker training
  - (3) Conduct ergonomic impact assessment and implement practices to minimize employee exposure, including providing proper tools and training in the use of such tools.
- (f) E-Recycling Facilities conducting EPM e-processing activities shall:
- (1) Provide proper personal protection equipment (PPE) such as safety glasses, safety shoes, and gloves.
  - (2) Provide job specific worker training
  - (3) Equip the e-recycling facility and the e-processing equipment with:
    - (i) A system engineered to reduce worker and environmental exposure to hazardous substances.
    - (ii) An emergency shut-off system.
    - (iii) Fire suppression equipment.
- (g) Hazardous substances shall be removed prior to e-processing or e-processed with adequate controls to reduce worker and environmental exposure to such hazardous substances. Any hazardous substance shall be handled in the following manner:
- (1) Stored in a secure manner that minimizes the potential for their release to the environment.
  - (2) In compliance with all applicable regulatory requirements for their storage, handling and transporting.
  - (3) E-recycled or disposed of in compliance with all applicable US and international laws.

#### **IV. Exports**

- (a) Any EPM that cannot be e-recycled and is intended for disposal shall not be exported.
- (b) E-Recyclers who export shall comply with all applicable local, state, federal and international laws.
- (c) Prior to exporting electronic products for e-processing, e-dismantling or refurbishment, e-recyclers must ensure that downstream e-recyclers and/or e-brokers provide written certification and/or submit to audits that ensure:
  - (1) All EPM will be e-processed in a facility that provides adequate controls to minimize the potential for releases of hazardous substances to the environment;
  - (2) All EPM will be handled in a manner that affords appropriate protections of human health and safety;
  - (3) Only EPM that cannot be safely e-recycled may be disposed; and,

(4) E-Recycling facilities possess and maintain adequate business records for a minimum of three years, to include:

- (i) Environmental compliance and inspection reports;
- (ii) Operating permits;
- (iii) Business licenses;
- (iv) Manifests;
- (v) Bills of lading;
- (vi) Waste disposal records;
- (vii) Contracts or commercial agreements; and,
- (viii) Records that document the location, condition and disposition of EPM.

(5) Compliance with all applicable environmental, health & safety regulations.

(6) Downstream e-recyclers possess and maintain a documented environmental, health and safety management system.

(7) Downstream e-recyclers provide to the e-recycler written notice of any material fines, regulatory orders or violations in the previous 5 years and within 60 days after any subsequent fines or regulatory order.

(d) Prior to exporting EPM for reuse, e-recyclers must warrant:

(1) 90% of all EPM must pass functionality testing in the "as is" condition. Warranty compliance can be met by the following:

- (i) In house testing;
- (ii) Upstream certification; or
- (iii) Audit return reports.

(2) EPM shall be packaged in such a manner that protects, against breakage and minimizes the potential for releases of hazardous substances during storage and transportation.

(3) Downstream e-recyclers and/or e-brokers shall certify to the e-recycler that EPM which cannot be reused shall comply with IV (c) of this section.

## **V. Data Sanitization**

(a) E-Recyclers shall define the level of sanitization for hard drives and other data storage devices with customers in a contract or equivalent commercial arrangement.

(b) When data destruction is stipulated by contract or an equivalent commercial arrangement, those hard drives or other data storage devices will be physically destroyed when the prescribed data destruction methods fail.

## VI. Definitions<sup>2</sup>

**E-Broker** is a person who engages in the buying, selling, and trading of EPM without e-demanufacturing

**Downstream E-Recycler** means the entity that receives material from an e-recycler and/or e-broker for additional e-processing and/or disposition.

**E-Demanufacturing** is the process of separating EPM into metallic and non-metallic parts that can be reused or e-recycled.

**E-Dismantling** is the manual e-demanufacturing of end-of-life (EOL) EPM to reuse or e-recycle components and commodities contained within.

**Electronic Products** are those EOL e-products defined in ISRI's Scrap Specifications Circular Guidelines for Electronics Scrap: ES-2005©.

**Hazardous Substances** are as defined by applicable law.

**EPM** are obsolete electronic products and/or materials.

**E-Processing** is the mechanical e-demanufacturing of EOL EPM to recover various commodities contained within.

**E-Recycler** is a person and/or group that engages in e-recycling of EPM.

**E- Recycling** is any process by which EOL electronic products which would otherwise become solid waste are collected, separated, reused or e-processed and returned to use in the form of raw materials or products.

**E-Recycling Facility** means all contiguous land, structures, other appurtenances, and improvements on the land, used for e-recycling EPM

**Refurbish** is a process by which non-functioning or damaged EPM is returned to a functioning state.

**Reuse** is redeploying EPM for the original intended purpose.

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<sup>2</sup> Electronics scrap definitions are based on ISRI's Scrap Specifications Circular Guidelines for Electronic Scrap: ES-2005©.



**ASSOCIATIONS REACH CONSENSUS ON E-SCRAP**  
*REUSE AND RECYCLING ARE THE PREFERRED METHODS OF E-SCRAP  
MANAGEMENT*

Silver Spring, MD (December 21, 2006)—“Reuse and recycling are far and away the preferred methods of e-scrap management—and with sufficient infrastructure, nearly all discarded electronic products could be technically and economically recyclable,” say four major recycling and solid waste management associations. The four associations joined together to promote the importance of reuse and recycling as the best way to manage discarded electronic products such as obsolete computers, monitors, televisions and cell phones, and to offer their assistance in the development of a comprehensive nationwide framework that will ensure that these goods are reused or recycled.

The Integrated Waste Services Association (IWSA), the National Recycling Coalition (NRC), the National Solid Wastes Management Association (NSWMA), and the Solid Waste Association of North America (SWANA) added that a solution at the federal level can provide a framework that could be complemented by each State, providing some standardization while allowing the States the flexibility to implement more stringent programs, if desired.

“NSWMA and its members are committed to working with other associations to ensure that recycling electronics products does not become an unfunded mandate for local governments or their private sector recycling contractors,” said Bruce Parker, NSWMA’s President and CEO.

These groups have committed themselves to the goal of greatly increasing to nearly 100 percent the recycling of e-scrap in the U.S. within ten years. They are calling on all electronic product manufacturers, recyclers, retailers, federal, state and local governments, environmental groups, trade associations and other stakeholders to work together to attain this goal.

“The recycling of computer equipment fuels economic activity, creates jobs and diverts potentially hazardous materials from landfills. Today, hundreds of companies and organizations exist throughout the U.S. to process computer products for reuse and recycling. We believe that with a concerted national effort America can reach a 100% goal of recycling and reuse of all discarded electronics,” said Kate Krebs, Executive Director, National Recycling Coalition.

The coalition is supporting, as a starting point, the adoption of financial incentives such as tax credits to consumers, manufacturers, retailers and recyclers for recycling old or

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unwanted computers, monitors and other electronic scrap waste, such as that proposed by Sen. Ron Wyden (D-OR).

“This agreement acknowledges the importance of ensuring that the appropriate parties manage electronic scrap materials in an environmentally responsible and equitable manner,” said Ted Michaels, President of IWSA.

“I am very pleased that the various recycling and solid waste management associations were able to reach common ground on this important issue. Perhaps this will encourage Congressional action on financial incentives to increase e-scrap recycling,” said SWANA Executive Director and CEO John H. Skinner, Ph.D.

Association Contact Information:

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## E-waste

Wednesday, November 08, 2006

 [Email article](#)  [Print article](#)

Our modern society depends heavily on electronics products from computers to televisions to cell phones and hundreds of other products. Yet while they are so important to our daily lives, eventually they are thrown out, either because they no longer work properly or because they are being replaced by newer, better products. When thrown away, electronics products are popularly known as "e-waste".

Many of these products include materials that can be harmful if managed improperly. Lead, for instance, commonly found in television sets, computer monitors and cell phones, can have serious health affects on humans if ingested. As a result, several states ban the disposal of some electronics products.

NSWMA believes that electronics waste must be handled properly. NSWMA does not support disposal bans on these products, however, because the evidence does not show a potential harm to human health or the environment. For a further look at the potential impact of e-waste in landfills see "Poison PCs?" and "Toxic Trash".

To counter misinformation about the impact of electronics products in landfills, the NSWMA along with the Solid Waste Association of North America sent a joint letter to the United States Congress noting that these products could be safely landfilled, while also noting the importance of recycling these products.

NSMWA supports e-waste recycling programs, but does not believe that e-waste recycling should be an unfunded mandate.

In 2006, NSWMA adopted the following policy on e-wastes:

"The National Solid Wastes Management Association (NSWMA), a trade association representing the solid waste and recycling industries, supports a multi-prong program for managing electronic product discards. This includes:

- decreasing the hazardous materials used in manufacturing electronics products without compromising product efficiency or safety;

- increasing recyclability by designing electronics products to be easily disassembled and processed;

- providing financial support for electronics recycling through an advance recycling fee or manufacturer responsibility requirements so that electronics recycling does not become an unfunded mandate for local government or for private sector recyclers;

- increasing electronics recycling by building upon the existing solid waste and recycling infrastructure for collection and processing;

- ensuring environmental, health and safety standards for proper management of collected materials including reporting and documentation procedures by end-markets;

- supporting programs to develop new processing technologies;

- supporting programs to develop new end markets, including the possibility of recycled content provisions in new electronics products;

- using "rates and dates" to ensure accountability if manufacturer responsibility programs are adopted;

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opposing bans on land disposal of electronics products until adequate infrastructure is readily available to ensure that they will be recycled.

NSWMA, joined by the Solid Waste Association of North America, the Integrated Waste Services Association and the National Recycling Coalition issued a press release and a joint policy on e-scrap pledging to work together to achieve as close to 100 percent recycling of these products as possible

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# Waste Age

## Toxic Trash

Oct 1, 2005 12:00 PM  
By Chaz Miller

**TOXIC TRASH! WE'VE ALL HEARD** activist groups warning us that landfilled electronic products will create toxic leachate when lead seeps out of the products into the groundwater. Those groups claim that landfills are full of other toxic products such as food and liquid wastes that will mix with discarded electronics to create poisonous leachate. The groups offer two alternatives: either encapsulate our electronics in plastic and bury them in hazardous waste landfills, or recycle all of them, regardless of cost.

However, when activist groups are asked for proof that lead or other hazardous materials have or can leach from landfilled e-waste into groundwater, they fall silent. Oh sure, they will point to test results from the Toxicity Characteristics Leaching Procedure (TCLP) that show that lead (but not mercury or other toxic constituents) can leach from these materials under laboratory test conditions. But they can't prove that this actually happens with landfilled e-waste.

What we have here is a clash of fearmongering versus science. Yes, lead can be lethal if handled improperly. Yes, many electronic products will fail the TCLP for lead.

The real issue, however, is if e-waste is hazardous in Subtitle D landfills. And the answer is no, because the TCLP does not predict real-world conditions. The TCLP requires that the tested product be ground up into itty-bitty pieces and then placed in an acid bath for 18 hours. Neither garbage trucks nor landfills grind up trash, and the pH of a landfill is neutral, not acidic.

As it turns out, even the EPA has doubts about the TCLP. EPA's Science Advisory Board has warned twice that the TCLP, which gives the worst-case scenario, is applied too broadly. EPA testified at a recent U.S. House of Representatives hearing that landfills that accept electronic products with cathode ray tubes for disposal have kept contaminants from harming the environment because of the neutral pH of landfills and leachate collection systems.

In addition, a recent Canadian study on portable electronic products showed that the possibility of significant amounts of heavy metals escaping from modern, well-maintained landfills is quite low. Maybe the hazards of e-waste disposal have been grossly exaggerated.

In order to counter the demagogic claims about e-waste disposal, the CEOs of the Solid Waste Association of North America (SWANA) and the National Solid Wastes Management Association (NSWMA) sent a letter to the chairmen of the U.S. House and Senate committees that are holding e-waste hearings. In the letter, the two CEOs strongly endorsed recycling as the first priority for electronics but also assured Congress that these products can be safely managed in Subtitle D landfills.

Yes, we should recycle electronic products. But we will recycle most effectively if our recycling programs are based on sound policy and designed for the right reasons. Of course, we should eliminate the use of toxic materials whenever possible, and we also should learn how to best collect and process electronic materials for recycling. However, we should not ban e-waste disposal unless we have sound data that support such a ban. Public sector budgets can't afford new recycling mandates.

Most importantly, let's stop the demagogic rhetoric about toxic trash. The real toxic trash is the exaggerated claims of toxic leachate and its potential harm.

*Opinions in this column do not necessarily reflect those of the National Solid Wastes Management Association or the*

# Waste Age

## Poison PCs

Sep 1, 2003 12:00 PM  
By Chaz Miller

**TOXIC TRASH. POISON PCS.** We've seen the horror stories in the press about mountains of discarded electronics products overwhelming our landfills and creating massive public health problems. "E-waste" such as computers, cell phones and television sets may be the latest threat to our way of life.

E-waste advocates warn that toxic components in these products, such as lead and mercury, can harm human health. They paint a dire picture of environmental wreck and ruin if we don't do something immediately to stop the flow of discarded e-waste into landfills.

Of course, they are right that lead and mercury can be lethal if handled improperly. But are they correct when they say e-waste is hazardous and should not be landfilled?

At the recent RCRA National Conference, Tim Townsend, a professor in Environmental Science at the University of Florida, Gainesville, answered part of that question. He gave the results of tests using the Toxics Characteristics Leachate Procedure (TCLP) to analyze cathode ray tubes and other e-wastes for toxicity. TCLP is EPA's test to determine if a waste is toxic and therefore a hazardous waste. As part of the test methodology, the Florida lab used an acid solution he described as the "worst case" for landfill leachate.

It was no surprise when the tested e-wastes often failed the TCLP for lead, but not for other toxic materials such as mercury. However, Townsend was careful to distinguish between whether e-waste was toxic under RCRA guidelines and whether e-waste disposal actually contributes to lead in landfill leachate.

During a question and answer session, N.C. Vasuki, CEO of the Delaware Solid Waste Authority (DSWA) pointed out that DSWA tests "showed no impact of e-waste on landfill leachate." Townsend responded by saying, "absolutely right, there is no compelling evidence."

So, should we worry about e-waste? Lead's toxicity is well-known. But lead's ability to migrate from a landfilled electronic product and become part of leachate is not. Townsend and his team at the University of Florida plan to run tests simulating landfill conditions. They are right to do so, but they also should run tests at operating landfills similar to those undertaken in Delaware.

Public and private sector landfill operators need to know if e-waste is a real public health issue or just the scare du jour. We need sound, scientific data on the health risks from landfilling e-waste so we can make the "e-right" decision on how to manage these products.

We also need to "design for the environment" and eliminate, whenever possible, the use of toxic materials when manufacturing products, and learn how to best collect and process electronic materials for recycling. But let's not ban e-waste disposal until we have sound data. Public sector budgets cannot afford new recycling mandates.

And let's stop the demagogic rhetoric about toxic trash. My favorite claim is that landfills "grind away" at e-waste and produce toxic byproducts. Glaciers grind, landfills just sit there. But then, demagoguery is the favored tool of those without science or data on their side.

*Opinions in this column do not necessarily reflect the National Solid Wastes Management Association or the Environmental Industry Associations. E-mail the author at: [cmiller@envasns.org](mailto:cmiller@envasns.org).*

<http://www.printthis.clickability.com/pt/cpt?action=cpt&title=Poison+PCs&expire=&urlID...> 2/7/2007

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**SWANA**<sup>®</sup>  
SOLID WASTE ASSOCIATION  
of North America

August 16, 2005

The Honorable John Thune  
Chairman, Superfund and Waste Management Subcommittee  
Environment and Public Works Committee  
United States Senate  
Washington DC 20510

Dear Senator Thune:

The National Solid Wastes Management Association (NSWMA) and the Solid Waste Association of North America (SWANA) represent companies and professionals in the solid waste and recycling industries. NSWMA is a not-for-profit association representing private sector solid waste collection, disposal, and recycling companies. SWANA is a professional education association in the solid waste management field with members from both the public and private sectors.

Our members are intensely involved in all aspects of managing solid wastes, including discarded electronic products. They collect and recycle electronic products and operate disposal facilities for electronic products that cannot be recycled. We strongly support the recycling of electronic products as the first priority waste management option for these materials. We believe that resource conservation is an unassailable reason for recycling electronic products. Moreover, waste reduction and product stewardship play a critical role in an integrated waste management system. NSWMA and SWANA stand ready to assist you in your efforts to reduce the amount of electronic waste going into our nation's landfills. However, we also believe that federal and state solid waste policy must be based on facts and that recycling programs are most likely to succeed when they are designed and implemented for the right reasons.

A number of inaccurate allegations were made at the July 26 electronic waste hearing concerning the safe disposal of electronic products in Subtitle D (municipal solid waste "MSW") landfills. MSW landfills and other facilities are regulated not only by the federal Resource Conservation and Recovery Act (RCRA), but also by numerous state laws and regulations ensuring that the public health and safety is protected. We assure you that electronic products can be safely managed in these facilities.

SWANA Research on MSW Landfills and Heavy Metals

In response to the banning of certain materials from disposal and the concern of the effects of heavy metals in landfills, SWANA's Applied Research Foundation conducted a project to establish reliable scientific and technical information on this subject. In the final report, "The Effectiveness of Municipal Solid Waste Landfills in Controlling the Releases of Heavy Metals to the Environment" (March 2004), the Foundation found that the natural processes occurring within a MSW landfill, such as precipitation

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4301 Connecticut Avenue, NW, Suite 300, Washington, DC 20008 – [www.nswma.org](http://www.nswma.org)  
1100 Wayne Avenue, Suite 700, Silver Spring, MD 20910 – [www.swana.org](http://www.swana.org)

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and absorption, effectively inhibit heavy metals from dissolving into the leachate or being released from the landfill in the form of landfill gas. Landfill liner systems substantially prevent leaking of leachate from the landfill to the land upon which the landfill is constructed. Due to the effectiveness of landfill liner systems that have been constructed with good quality assurance programs, it appears that 99 percent or more of the leachate generated in MSW landfills is collected and treated by recirculation or other on-site or off-site wastewater treatment systems. SWANA is more than happy to submit the full report to the Subcommittee at your request.

#### Further Research on TCLP and MSW Landfills

Much was said at the hearing about the relationship between the Toxicity Characteristics Leaching Procedure (TCLP) and electronic waste. TCLP is the EPA-mandated test to determine if a substance should be regulated as a toxic (hazardous) waste under the requirements of RCRA. This test determines if, in fact, a hazardous material such as lead leaches out of a product. As noted at the hearing, tests conducted by Dr. Timothy Townsend, University of Florida, for the Florida Center for Solid and Hazardous Waste Management, show that a majority of the cathode ray tubes (CRTs) tested for lead exceeded the regulatory level for characterization as a hazardous waste (Report #99-5, Characterization of Lead Leachability from Cathode Ray Tubes Using the Toxicity Characteristic Leaching Procedure).

However, as Dr. Townsend and others have noted, the TCLP is a conservative test designed to determine the worst-case scenario. To conduct the TCLP test, a diamond-tipped tool grinds up the test material into tiny bits. In the Florida test, the largest bit was less than half an inch. The pieces are then placed in an acid solution and tumbled for 18 hours. Then, the pieces are tested for toxic constituents such as lead.

These test conditions, regardless of how effective they are for determining if ground-up acid-bathed materials can leach lead, do not approximate the conditions in a Subtitle D landfill. Solid waste disposed in Subtitle D landfills is not generally ground or shredded. While a CRT can be crushed when it is collected and placed in a landfill, few if any pieces will be smaller than half an inch in size.

Significantly, EPA's Science Advisory Board has raised questions about the use of the TCLP (see EPA-SAB-EEC-COM-99-002, February 26, 1999, "Waste Leachability: The Need for Review of Current Agency Procedures), arguing that the TCLP is applied too broadly and when used to characterize toxicity can be improved by accounting for additional parameters.

#### EPA Testimony on E-waste in Landfills

Barry Breen, Deputy Assistant Administrator of the U.S. EPA's Office of Solid Waste and Emergency Response, testified at the July 20, 2005 hearing of the U.S. House Subcommittee on the Environment and Hazardous Materials, that the pH in a mature landfill is usually close to neutral (usually around 6.8, neutral is 7.0). In other words, the landfill is a neutral environment and not acidic. As such, CRTs in a Subtitle D landfill will not be bathing in an acid solution.

Mr. Breen further testified, in regard to MSW landfills that accept CRTs for disposal, that "EPA has found pH levels and leachate collection systems have kept contaminants from harming the environment." "If a landfill leachate collection system were to fail," he said, "the level of contaminants would rise to twice the level of national safe drinking water standards; however, these contaminants would be rendered harmless by being diluted" (July 21 *BNA Daily Report for Executives*, page A-35).

We would add that Dr. Townsend noted at the RCRA National Conference in the summer of 2003 that there is no compelling evidence of the impact of e-waste on landfill leachate. Dr. Townsend and his research team are now conducting an "Assessment of True Impacts of E-Waste Disposal in Florida." The

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first annual report was issued in December 2003 (Florida Center for Solid and Hazardous Waste Management, Report #04-0232008). This report explains why and how the study is being conducted and gives preliminary results. These results include a finding that "concentrations of heavy metals in landfills were relatively low." Further work is being conducted and the final report will be released in January 2006.

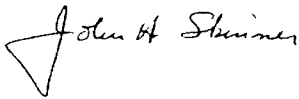
#### Conclusion

Based on our understanding of the results of numerous studies, as shown by the SWANA report, and our understanding of the nature of the TCLP test and the normal operations at a Subtitle D landfill, we believe the allegations made at the hearing that toxic leachate generated from CRTs and other electronic products is going into groundwater are without factual basis.

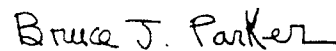
We respect the dangers that lead can cause to human health. As owners and operators of Subtitle D landfills, our members are dedicated to protecting the public health and the environment. In order to operate our facilities as safely, efficiently, and economically as possible, we need to know the real impact of electronic products in a landfill so that we can take the necessary steps to ensure that the public health and safety are protected while not wasting public funds on unnecessary procedures, unnecessarily alarming the general public, or fueling the "not in my backyard" ("NIMBY") approach to opposing new or expanded waste management and recycling facilities that are fully compliant with federal, state, and local laws.

If you have any questions about electronic product recycling or disposal, please contact us. Bruce Parker or Chaz Miller of NSWMA can be reached at 202-244-4700 and John Skinner or Mac Bybee of SWANA can be reached at 301-585-2898.

Sincerely,



John Skinner, Ph.D  
Executive Director and CEO  
SWANA



Bruce J. Parker  
President and CEO  
NSWMA



**Testimony before the Environment Committee of the New Jersey Senate on Thursday, February 08, 2007.**

Good morning Mr. Chairman and members of the Committee. I want to thank you for giving me the opportunity to speak again on the important topic of Electronics Waste Recycling. My name is Linda Klose. I am the executive director for the New Jersey-Pennsylvania Council of AeA, Advancing the Business of Technology and a resident of the state of New Jersey. AeA, formerly called the American Electronics Association, is the world's largest industry association representing the high technology community. With more than 2,000 members in the United States, our unique grassroots structure and overseas presence is not duplicated in any other high technology industry association. The New Jersey-Pennsylvania Council of AeA serves member companies in its three-state area which includes Delaware through educational programs, network opportunities, and public policy advocacy. We are committed to ensuring a strong and healthy business climate in which high technology companies can grow and thrive.

Industry Background

Providing service to our members is our primary focus. But, as the leading industry association for high technology companies, we also have access to a great deal of information about the growth of technology industries and what that means to the economic vitality of a given region. Technology, and the manufacturing associated with it, is an important part of New Jersey's economy. In 2004, based on U.S. Bureau of Labor Statistics, there were 197,107 citizens in high-tech sectors (down from 202,587 in 2003) employed by 13,892 firms (down from 14,611 in 2003) in New Jersey. New Jersey remained ninth in high technology employment in 2004 but slid from ninth to eleventh in R&D spending in the US. There was also \$3.3 Billion in high technology goods exported from New Jersey to other countries in 2005. That's 18% of all of New Jersey's exports. Clearly, technology is not just something bought and sold in New Jersey but something that is actually produced here which means jobs and revenue for the state. In addition, there is a great deal of high technology retail activity in this state which generates still more jobs and tax revenue for our state.

AeA's members include every aspect of high technology from the raw materials of our industry to the manufacturer of its finished goods. Here in New Jersey, I represent members who have high technology businesses from a few employees up to multi-billion dollar, global corporations. These business people are happy and proud to call New Jersey home for their families and their businesses.

All of my association's member companies, whether headquartered in New Jersey or elsewhere, want you to know how concerned we are with protecting our environment. As responsible citizens, we want to protect our families and our future. We also want to protect the economic vitality of our state. It is a tricky balance.

I thank the members of this committee for proceeding so carefully. Both Senate Bill 554 and Assembly Bill 3572 show a great deal of thought. Still, the biggest problem that I foresee with any bill is that it will set New Jersey apart and make it less competitive with its neighboring states.

AeA has been in the forefront of working with the European Union on the RoHS and WEEE directives over the last few years. In doing so, we have become aware of how difficult a process this is. After years of working on the regulations, there is still a great deal of work to do.

**My testimony today is based on the assumption that S554 is modified in the manner given at the hearing a year ago.**

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### Hazardous Materials Restrictions

In regard to Hazardous Materials Restrictions, because of the existing European Union directives, US electronics' manufacturers have moved to a standard based on the EU's RoHS directives. When California updated its hazardous materials restrictions year before last, it opted to harmonize their standards to the EU's. This eliminated the need for extensive testing and regulations by the state.

For any state to ask for a separate set of standards on Hazardous Materials Restrictions from the rest of the world, seems counter-productive. At best, it will create an enormous amount of bureaucracy and regulations. At worst, it could mean that some manufacturers would fail to sell their product in that state. Certainly, it would raise the cost of goods sold. I can see no purpose of any kind for setting a separate state standard.

In addition, if the electronic components are to be collected and recycled, why do the materials need to be restricted? Manufacturers are already designing their products with recycling in mind.

**Thank you for agreeing last year that the best course of action on Hazardous Materials Restrictions was to adopt a plan that will harmonize with the European standard.**

### Labeling Requirements

Pick-up your laptop and take a look underneath. At least six labels are probably there. Adding more labels will not improve consumer knowledge, just consumer confusion, especially if each state must be listed separately. Since the original S554 covers items even smaller than a laptop, in some cases, it is impossible to affix a sufficiently large label to meet its proposed requirements. Also, printed instructions are inflexible and cannot be changed after the label is printed. In addition, it is useless for orphaned or historic waste. A label that lists the manufacturers' information is sufficient for the consumer to find the latest information via its website. **Again, thank you for agreeing to a basic labeling requirement of the manufacturer's name. My members are happy and proud to comply with this requirement.**

### Electronics Recycling

The high-tech industry is committed to reducing the environmental impacts of our products throughout their lifecycle: from design, to use, to end-of-life. Many high-tech manufacturers have made significant investment in design for the environment (DfE) over the past several years in an effort to minimize the use of certain materials, as well as allow for the ease of recycling of the electronic products. Several companies have on-going company recycling programs or provide sponsorship and support to aid in the development of local recycling infrastructure. The recycling of unneeded electronics products is complicated. There are so many products with a wide variety of materials and construction. **AeA cannot take a position on a financing model due to divided membership. However, individual member companies are present here today and/or will be submitting written letters stating their position on the financing mechanism.**

### Summary

I know that our state legislators, led by you Senator Smith, have put an enormous amount of thought into the best way to handle our state's electronic waste. As a citizen of New Jersey, I ask you to continue to handle this issue carefully. I want New Jersey set apart in a good way, not one that will raise costs and limit choices.

Thank you again for permitting me to testify on this important issue.

Linda K. Klose, Executive Director  
New Jersey-Pennsylvania Council  
AeA, Advancing the Business of Technology  
732-340-1530  
linda\_klose@aeenet.org

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**TOSHIBA**

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TOSHIBA AMERICA CONSUMER PRODUCTS, L.L.C.  
82 TOTOWA ROAD  
WAYNE, NEW JERSEY 07470

February 8, 2007

Honorable Bob Smith  
Chair  
Senate Environment Committee

**SUPPORT FOR Substitute SB 554**

Dear Chairman Smith:

On behalf of Toshiba America Consumer Products, L.L.C., which has its North America Headquarters Office located in Wayne, I would like to offer our strong support of the substitute language for Substitute SB554, the Electronic Waste Management Act.

By establishing a sustainable source of funding that an advance recycling fee provides, New Jersey can 1) ensure all its residents have free and convenient access to recycling, and 2) ensure that video display devices and computers are properly managed and kept out of state landfills.

Advantages of Substitute SB 554

The upfront financing mechanism provided by Substitute SB 554 creates a simple, straight forward process to give ultimately counties and municipalities sufficient funding to pay for the recycling of covered electronic devices.

Further, Substitute SB 554 would build upon the success of the California electronics recycling program by creating full funding for local waste collection and eliminating inefficiencies incumbent in other waste collection schemes that require expensive sorting and managing by brand.

Substitute SB 554 also embodies the concept of shared responsibility among all parties including manufacturers, government, retailers, recyclers, and consumers. By ensuring every party in the chain of commerce plays a meaningful role, this legislation will encourage greater recycling of electronics at their end of life and help keep these products out of New Jersey landfills.

As an electronics manufacturer with a substantial presence in the state, I urge your support of Substitute SB 554.

Sincerely,



Matthew G. Gobble  
Environmental Manager  
Toshiba America Consumer Products, L.L.C.

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**Testimony before New Jersey Senate Environment Committee on S 554  
("Electronic Waste Recycling Act")**

**February 8, 2007**

**Statement of Lloyd Hicks, Director, Solid Waste Prevention Program, INFORM, Inc.**

**Introduction**

Good afternoon, Mr. Chairman and members of this Committee. My name is Lloyd Hicks. I am Director of the Solid Waste Prevention Program at INFORM, a national, nonprofit, environmental research organization. As a professional who has provided government and environmental agencies, advocacy groups, and manufacturers with guidance on the design and implementation of legislation for discarded electronics for the past year and a half, I am pleased to provide comments on S 554, the Electronic Waste Recycling Act.

Toxic substances contained in electronic products can pose threats to human and environmental health after those products have been sent to landfills or burned in incinerators. For this reason, numerous products have been classified as hazardous waste.<sup>1</sup> For processors who recycle electronics, most materials have a positive market value, excluding the leaded glass, batteries, and mercury. And research shows that recovering many of the materials contained in electronics, as opposed to extracting raw materials from the earth, makes environmental sense.<sup>2</sup> Plastic housings and metals can be recycled, and circuit boards contain gold, silver, and platinum that can be recovered; however, collection and labor for processing still come at a cost. The refurbishing and sale of some components or equipment and the resale of materials offset some of these costs, but not all. How products are designed and produced is presently working against processors because of the hazardous substances contained in electronics and the difficulties of disassembling the equipment. Given these conditions, S 554 can set a framework for financing the appropriate handling of discarded electronics.

I commend the sponsors of S 554 for recognizing extended producer responsibility (EPR) as a means for shifting the financial burden away from municipalities and incorporating the end-of-life costs in a product's price—which encourages companies to design products that are easier to recycle and can lower the costs of recycling. As proof that this approach is not merely an academic one, in its global recycling policy, Dell's position is that companies should recover their products from consumers free of charge through a process that is as easy as purchasing a new product. Dell also states that, "We accept responsibility for continually improving the environmental design of our products and their end-of-life management. Dell encourages this same level of responsibility from other producers throughout the electronics industry."<sup>3</sup> S 554 can help encourage a consistent level of responsibility from all electronics manufacturers, and we look forward to the adoption of this policy in New Jersey.

**Summary of California and Maine Approaches**

A national US electronics recycling law is not forthcoming. The multi-stakeholder National Electronics Product Stewardship Initiative (NEPSI) first met in 2001 with the goal of creating a national US electronics recycling system that would include a viable financing mechanism. The NEPSI process ended, and a consensus was never reached. California (2003) and Maine (2004) adopted their own laws to address discarded electronics. From the systems operating in these two states, we can distinguish the different approaches to financing electronics recycling programs: (1) manufacturer financed systems with costs incorporated into the price of the product and (2) consumer financed systems with a tax collected at the time of purchase—also known as an Advanced Recovery Fee (ARF). According to some preliminary cost data, (1) higher management costs are associated with the ARF-based systems (\$11.6 million or \$0.32/capita in California and \$207,500 or \$0.16/capita in Maine), and (2) market-based prices for

<sup>1</sup> INFORM, "Benefits of Recycling Electronics in the US," available at [www.informinc.org](http://www.informinc.org).

<sup>2</sup> Jaco Huisman, *The QWERTY/EE Concept: Quantifying Recyclability and Eco-Efficiency for End-of-Life Treatment of Consumer Electronic Products*, Delft, Netherlands: DfS, 2003.

<sup>3</sup> Dell Computer, "Global Recycling Policy," available at [www.dell.com/downloads/global/corporate/enviro/recovery\\_policy.pdf](http://www.dell.com/downloads/global/corporate/enviro/recovery_policy.pdf) (accessed October 26, 2006).

processing discarded electronics, as in Maine, have been found to be lower than the fixed prices set by regulation, as in California.<sup>4</sup> Regarding system management, in California, 8,000–9,000 retailers regularly remit fees to the Board of Equalization, and in Maine, the consolidators receive financing from approximately 150 manufacturers that own brands collected within the state. Regarding costs of collection and processing, in California fixed prices (\$0.20/lb for collectors and \$0.28/lb for processors) are used to reimburse operating costs, whereas in Maine’s system the market-based price has turned out to be less (total operating costs range from \$0.19/lb to \$0.38/lb). Maine’s total operating costs do not include brand separation, which is not required in Maine’s regulations. If the manufacturer’s product is physically separated, the cost is borne by the manufacturer that requests the service.

In addition to the environmental goals, what matters from a policy perspective is the actual cost to the end-user. The ARF approach takes money from consumers at the sales counter and directs it toward government-run programs, some of which can end up generating a large financial reserve, rather than being used to fund the actual operational costs of processing discard electronics. For example, California collected \$109 million<sup>5</sup> in the first 18 months of operating its collection program, and processors claimed only \$57.5 million.<sup>6</sup> Using state budget figures and our own calculations, an estimated \$15.7 million went to administration in that period. During this time, California built a financial reserve of an estimated \$35.8 million, after factoring in administration costs. Based on the program operation during this period, the fees have no apparent relationship to the actual amounts of electronics collected and recycled in California; therefore, costs to the consumers are not necessarily justified. In Maine, financing covers the actual operational costs of the program because the system is based on the actual weight of the electronics returned. The market-based rates paid for the actual weight of returns do not create a monetary reserve, while fixed rates fed from an ARF can create a reserve.

### A Direction for New Jersey

New Jersey needs a system that better controls costs compared to a government-run program and employs market forces that encourage manufacturers to make continual design improvements so products are easier and cheaper to recycle. The hybrid ARF/EPR approach in S 554 seeks to address televisions and other electronics separately because of the difference in functional life. Section 2 of S 554 states that televisions are “sold, utilized and discarded with far less frequency than personal computers.” Findings from consumer surveys by the Consumer Electronics Association (CEA) do suggest that the average lifetime of a television is more than a personal computer, ranging from 5.7–6.9 years for personal computer products and 11.4 years for a color TV.<sup>7</sup> But other surveys by the CEA show that televisions have a household saturation rate of 95% compared to 73% for personal computers.<sup>8</sup>

S 554 can be designed to factor in different functional lifetimes of products without using a hybrid ARF/EPR approach. A system designed to fulfill requirements of a German law factors in the rate of return for products to calculate a manufacturer’s corresponding financial obligation. Most important, Germany’s system addresses new market entrants by multiplying the weight of products placed on the market by the expected percentage rate of return, then multiplying that figure by the expected cost of recycling that type of electronic product.<sup>9</sup> This is a type of financial assurance mechanism used to cover future recycling. As this example shows, an ARF system does not need to be used to accommodate the different functional lifetimes of electronics. Washington state’s law contains provisions that also address new entrants.

S 554 can provide flexible options for manufacturers by solely following an EPR approach. Washington’s structural and financing system will provide flexibility for manufacturers to (1) join a “standard plan,” known as the

<sup>4</sup> Jeremy Gregory and Randolph Kirchain, *A Comparison of North American Electronics Recycling Systems*, Cambridge: MIT Materials Systems Laboratory, October 2006.

<sup>5</sup> Personal communication with Louise Bertoni, California Board of Equalization, February 2007.

<sup>6</sup> Personal communication with Shirley Willd-Wagner, California Integrated Waste Management Board, February 2007.

<sup>7</sup> Shawn DuBravac, Consumer Electronics Association, “From Here to There: Facts on Product Life Cycles and Recycling,” presentation at E-scrap conference, Orlando, FL, October 27–28, 2005.

<sup>8</sup> Shawn DuBravac, Consumer Electronics Association, “From Here to There: Facts on Product Life Cycles and Recycling,” presentation at E-scrap conference, Austin, TX, October 19, 2006.

<sup>9</sup> Bitkom Garantiesystem Altgeräte, “The Amount of the Guarantee Subscription,” available at [http://www.garantiesystem-altgeraete.de/en/content/c\\_hoehe\\_garantie.php](http://www.garantiesystem-altgeraete.de/en/content/c_hoehe_garantie.php).

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Washington Materials Management and Financing Authority, in which economies of scale are reached collectively, or (2) operate their own program if they have brands that make up at least 5 percent of electronics col

lected for recycling.<sup>10</sup> Washington's standard plan will include new market entrants and exact an appropriate financial contribution from each participant to cover program operations. The board of directors for the standard plan is composed of representatives from television and computer manufacturers. Depending on the apportionment of costs set by this board of directors, new entrants will be required to provide some type of financial assurance mechanism to cover long-term operating costs and to prevent unfunded orphan products in the future.

S 554 can have a shared, standard plan as in Washington state's law that can establish a low-cost system for television collection and recycling. A standard plan based on EPR can (1) have less administrative costs due to the direct participation of manufacturers instead of thousands of retailers, (2) have a competitive bidding process that tracks market-based rates instead of fixed rates, and (3) set limitations for a reasonable operating contingency instead of generating excessive reserves. ARFs have been shown in California (and in some countries in Europe) to have no apparent relationship to the actual amounts of electronics collected and recycled; therefore, costs to the consumers are not justifiable. S 554 needs to use the model created by Washington state, placing significant responsibility in the hands of manufacturers, leading to a system that better controls costs and encourages manufacturers to make continual design improvements to create a more resource-efficient process.

Thank you again for the opportunity to testify today.

Respectfully submitted,  
Lloyd Hicks

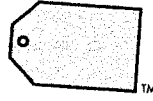
*For more information, contact Lloyd Hicks at [hicks@informinc.org](mailto:hicks@informinc.org) or by phone at 212-361-2400 (x244).*

### **Background on INFORM**

Founded in 1973, INFORM is a national, nonprofit, environmental research organization that specializes in identifying innovative business practices, technologies, and products that can improve the efficiency with which our country uses its natural resources while preventing waste and contamination at the source. INFORM's research is published in in-depth reports (more than 100 to date) and articles, is widely publicized in the press, and is used extensively by government, business, and environmental leaders in shaping their environmental polices and programs. We have analyzed public policies that focus on extended producer responsibility (EPR) for more than a decade. We published our first research report on EPR in 1994, *Germany: Garbage and the Green Dot*, and to date we have produced five other reports on EPR issues and policies: *Extended Producer Responsibility: A Materials Policy for the 21st Century* (2000); *Leasing: A Step Toward Producer Responsibility* (2000); *Waste in the Wireless World: The Challenge of Cell Phones* (2002); *Calling All Cell Phones: Collection, Reuse, and Recycling Programs in the US* (2004); and *Wireless Waste: The Challenge of Cell Phone and Battery Collection* (2005).

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<sup>10</sup> Washington State Department of Ecology, Chapter 70.95N RCW Electronic Product Recycling Law, available at [www.ecy.wa.gov/programs/swfa/eproductrecycle](http://www.ecy.wa.gov/programs/swfa/eproductrecycle).



**BEST BUY**™

February 8, 2007

Senator Bob Smith, Chair  
Senator Stephen M. Sweeney, Vice Chair  
Senator John H. Adler  
Senator Andrew R. Ciesla  
Senator Henry P. McNamara

Senate Environment Committee  
State House  
P/O Box 098  
Trenton, NJ 08625-0098

**RE: Electronics Recycling**

Dear Senators:

Best Buy Co., Inc. is a specialty retailer of consumer electronics, personal computers, entertainment software and appliances. We also manufacture consumer electronics under our private label brands. Best Buy currently employs more than 2,700 people in seventeen retail stores and one distribution warehouse in the state of New Jersey.

We applaud your committee's efforts to examine the issue of electronics recycling (e-waste) and thank you for your leadership on this important issue. While Best Buy ultimately prefers a national solution to the management of e-waste, we recognize the growing need by States to deal with this issue and we have worked in conjunction with many state legislatures and stakeholders throughout the country to support a manufacturer responsibility solution. Your colleagues in the New Jersey State Assembly are currently advancing A3572 – Electronic Waste Recycling Act. We believe this approach best establishes a manageable, efficient and effective consumer electronics collection and recycling program for the State of New Jersey. We hope your committee will consider this legislative approach and work to pass it this session.

As your committee debates e-waste proposals, we respectfully urge you to oppose any attempts to impose a California-style advanced recovery fee (ARF) on the purchase of electronics at retail point of sale in New Jersey. A manufacturer responsibility approach is preferable to an advanced recovery fee approach for the following reasons:

- **An ARF at the state level further complicates an already unfair tax system.** Pure online sellers without nexus in New Jersey have no requirement to collect the fee which puts New Jersey brick and mortar retailers at a competitive disadvantage. Placing additional fees at point of sale further complicates streamlining the sales tax system and emboldens the U.S. Supreme Court's *Quill* decision.
- **Under an ARF model, there is no incentive to reduce recycling costs or design and manufacture "greener" products.** An ARF is a costly system for retailers to implement and administer. It also establishes state recycling program that will only increase costs of recycling over time and does not provide an incentive for manufacturers to design "greener" products.

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**BEST BUY™**

- **Recycling of electronic waste will always cost more than value of the residual scrap.** A system that provides an incentive to reduce the costs of recycling through design of the product has the greatest potential to provide the most cost-effective solution and ultimately be most cost-effective for the consumer.
- **Manufacturer responsibility represents a balanced approach.** It provides for a shared responsibility for the recycling of e-waste among all stakeholders, including manufacturers, retailers, government and consumers.

Finally, Best Buy is committed to responsible product stewardship. Since 2001, Best Buy has helped consumers in New Jersey recycle over 400,000 pounds, or 200 tons, of electronics in an environmentally responsible way through our voluntary recycling events. In addition to these events, we also offer everyday recycling in our stores of cell phones, PDAs, ink cartridges and rechargeable batteries free of charge. Best Buy was named "2006 Retailer of the Year" by the New Jersey Retail Merchants Association, in part, for our leadership on voluntary consumer electronics recycling initiatives.

Again, thank you for your committee's leadership on this issue. We hope you'll support a manufacturer responsibility approach. Please feel free to contact me or Mike Hiltner, Sr. Government Relations Specialist, at 612-291-8707 or [mike.hiltner@bestbuy.com](mailto:mike.hiltner@bestbuy.com) should you have any questions or we can be of assistance in any way.

Sincerely,

Paula J. Prah  
Vice President, Public Affairs

CC: John Holub, President, New Jersey Retail Merchants Association  
Marc Pearl, Executive Director, Consumer Electronics Retailers Coalition

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**FOR IMMEDIATE RELEASE**

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**PANASONIC PLASMA TVS NOW FEATURE NO-LEAD  
DISPLAY PANELS, IMPROVED PHOSPHOR PERFORMANCE**

**SECAUCUS, NJ** (November 27, 2006) – Panasonic Corporation of North America, the principal U.S. subsidiary of Matsushita Electric Industrial Co., Ltd. (NYSE: MC), confirmed that Panasonic-branded Plasma TVs are the first in the U.S. market to feature lead-free Plasma Display Panels. The Display Panel is the Plasma TV's glass-sealed image display device, equivalent to a cathode ray tube in a conventional television. In addition to the elimination of lead in the panel, Panasonic has made significant advances in enhancing the performance of the phosphors used to render colors on the screen.

In conventional manufacturing processes for Plasma Display Panels, lead oxide glass is used in the dielectric layer, electrodes, glass sealant and other structural elements. Lead oxide glass was valued for its ability to stabilize production yields and quality. Now, as a result of advances Panasonic has made in material sciences and manufacturing processes, stable production yields can be secured without the use of lead oxide. In this way, the company has been able to eliminate all of the roughly 70 grams (0.15 pounds) of lead used in a 37-inch plasma panel.

"Panasonic is committed to achieving a sustainable future through the development of environmentally conscious products," said David Thompson, Panasonic Corporation of North America's director of environmental affairs. "Now with this achievement, we believe that Panasonic plasma displays have outpaced our flat panel TV competitors in an important area of environmental performance: the elimination of hazardous heavy metals such as lead, cadmium, hexavalent chromium, mercury -- commonly used in backlit LCD TVs and in projection TV lamps. In fact, we estimate

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that worldwide the elimination of lead from our Panasonic plasma panels will mean a reduction of close to 300 metric tons of lead – the approximate weight of two 747 commercial airliners -- that would otherwise have been used in their manufacture each year.”

Noah Horowitz, a Senior Scientist at the Natural Resources Defense Council (NRDC), commended Panasonic for being the first in the industry to eliminate lead in its new plasma TVs and for significantly reducing the energy consumed by their new models. “NRDC is very supportive of Panasonic’s longstanding record of consistently delivering some of the most environmentally friendly products in the market,” said Mr. Horowitz. “Panasonic’s leadership in this area is noteworthy and we challenge the rest of the TV industry to implement similar improvements to their products.”

“Panasonic is also making progress on reducing the amount of energy each Plasma TV consumes,” said Mr. Thompson. “There is an inaccurate but persistent myth that Plasma TVs consume much more energy than other types of digital television. The truth is that large screen TVs consume more energy than the smaller screened CRT-based TVs they replace. Our research indicates that energy consumption by large-screen Plasma, LCD and DLP TV sets is on average comparable. But as a relatively new technology, compared with LCD, Plasma is capable of becoming considerably more energy-efficient, and Panasonic plans to lead the way to this goal.”

Panasonic’s advanced phosphor technology is estimated to deliver 60,000 hours of use -- more than 25 years at 6.5 hours of viewing a day – before reaching half brightness. Phosphor improvements have also led to the virtual elimination of the burn-in phenomenon in Panasonic Plasma TV. Long-life products translate into lower use of environmental resources for the simple fact that they need to be replaced far less often.

#### **About Panasonic**

Based in Secaucus, NJ, Panasonic Corporation of North America markets a broad line of digital and other electronics products for consumer, business and industrial use. The company is the principal North American subsidiary of Matsushita Electric Industrial Co., Ltd. (NYSE: MC) of Japan, and the hub of Panasonic’s U.S. branding, marketing, sales, service and R&D operations. Information about Panasonic and its products is available at [www.panasonic.com](http://www.panasonic.com). Additional company information for journalists is available at [www.panasonic.com/pressroom](http://www.panasonic.com/pressroom).

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**Mitsubishi Digital Electronics America, Inc.**

1 Matrix Drive  
Monroe Township, NJ 08831  
Phone: (609) 409-5060  
Facsimile: (609) 409-1786

February 7, 2007

Honorable Bob Smith  
Chair  
Senate Environment Committee  
New Jersey Senate  
State House  
Trenton, NJ 08625-0099

**SUPPORT FOR Substitute SB 554**

Dear Chairman Smith:

On behalf of Mitsubishi Digital Electronics America, Inc. which has a major distribution center in Monroe Township, I would like to offer our strong support for Substitute SB 554, the Electronic Waste Management Act.

By establishing a sustainable source of funding that an advance recycling fee provides, New Jersey can ensure that all its residents have free and convenient access to recycling, and that video display devices and computers are properly managed and kept out of state landfills.

**Advantages of Substitute SB 554**

The upfront financing mechanism provided by Substitute SB 554 creates a simple, straightforward process to give counties and municipalities sufficient funding to pay for the recycling of covered electronic devices.

Further, Substitute SB 554 builds upon the success of the California electronics recycling program by creating full funding for local waste collection and eliminating inefficiencies incumbent in other waste collection schemes that require expensive sorting and managing by brand.

Substitute SB 554 embodies the concept of shared responsibility among all parties including manufacturers, government, retailers, recyclers, and consumers. By ensuring every party in the chain of commerce plays a meaningful role, this legislation will encourage greater recycling of electronics at their end-of-life and help keep these products out of New Jersey landfills.

As an electronics manufacturer with a New Jersey facility, I urge your support of Substitute SB 554.

Sincerely,

*Michael Zito*

Michael Zito

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**MITSUBISHI ELECTRIC**

**Mitsubishi Digital Electronics America, Inc.**

1 Matrix Drive

Monroe Township, NJ 08831

Phone: (609) 409-5060

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Regional Distribution Manager

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## Consumer Electronics Retailers Coalition



www.ceretailers.org

February 7, 2007

Senator Bob Smith, Chair  
Senator Stephen M. Sweeney, Vice Chair  
Senator John H. Adler  
Senator Andrew R. Ciesla  
Senator Henry P. McNamara  
Senate Environment Committee  
State House  
P/O Box 098  
Trenton, NJ 08625-0098

### **RE: Public Hearing on Handling Electronics at Their-End-of-Life**

Dear Chairman Smith, Vice Chairman Sweeney & Distinguished Members of the Senate Environment Committee:

I am writing on behalf of the Consumer Electronics Retailers Coalition (CERC) in support of your efforts to structure for the State of New Jersey a successful system to handle consumer electronics at their end-of-life. CERC has reviewed the recently amended Assembly Bill A-3572 – “Electronic Waste Recycling Act” – which we understand has passed out of its Environment Committee, and has concluded that if passed by the Senate and signed into law that it would establish a manageable, efficient and effective consumer electronics collection and recycling program for the State of New Jersey. We applaud your efforts in the Senate to address the issue and are grateful that you are holding a public hearing. We look forward to your committee considering this legislative approach, and seeing it pass this session.

CERC is a national organization representing major consumer electronics retailers and general retailers who sell consumer electronics – many of whom have numerous stores, have invested millions of dollars and currently employ thousands of residents in New Jersey. We work closely and share a number of members with the New Jersey Retail Merchants Association in our policy efforts. Additionally, CERC includes the leading retail industry trade associations that are aligned with us on this and other critical policy issues of concern to retailers, such as the National Retail Federation, the North American Retail Dealers Association and the Retail Industry Leaders Association.

CERC members are actively working to get national legislation passed because we strongly believe that ultimately a uniform, harmonized approach will be ultimately better for every stakeholder and citizen, including New Jersey consumers and the state’s environment. However, understanding your desire to move forward on this issue, we do support A-3572. Its “Product Stewardship” approach has garnered broad support from retailers, environmentalists, certain manufacturers and a number of other stakeholders.

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We strongly believe that the approach embraced in the legislation under active consideration in the Assembly incorporates a manageable, reasonable and balanced system that incorporates a producer responsibility approach for handling consumer electronics at their end-of-life. CERC members collectively believe that a producer responsibility system will continue to encourage innovation and the design of products that are environmentally friendly, a system that encourages reuse and refurbishment, and, when a product has truly reached its end-of-life to be recycled – providing consumers with a variety of choices.

While the primary responsibility of financing end-of-life management should be placed on those who design and manufacture the covered products, a shared responsibility mechanism, which A-3572 embraces, is the proper way to go. Retailers understand that they will have a responsibility to help educate customers on the value of reuse, refurbishment and recycling of unwanted electronic products. We also fully accept language where retailers would be considered the ‘manufacturer’ when a covered electronic device is a private label or when a retailer is the importer of record and the true producer has no presence in the U.S. market.

Thank you for the opportunity to share CERC’s positions concerning consumer electronic product management legislative efforts in New Jersey. We very much appreciate your efforts to discuss this issue in the Senate Environment Committee and for holding this initial public hearing. We look forward to working closely with you in developing a fair and equitable electronics recycling management plan that will be good for New Jersey – its businesses, and most of all, your constituents – our customers. Please do not hesitate to contact us if we can be of further assistance. I can be reached directly at (202) 263-2585 or [pearl@ceretailers.org](mailto:pearl@ceretailers.org).

Sincerely,



Marc A. Pearl, Executive Director  
Consumer Electronics Retailers Coalition

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**About CERC:** The Consumer Electronics Retailers Coalition is a public policy issue organization consisting of the major specialty retailers of consumer electronics products and retail associations. CERC members include Amazon.com, Best Buy, Circuit City, RadioShack, Target, Wal-Mart, and the leading retail industry trade associations – NARDA, NRF and RILA. More information on the organization and its positions is available at [www.ceretailers.org](http://www.ceretailers.org).

Assembly Bill 3572 Electronic Waste Recycling

Return Share (A3572) vs. Advance Recycling Fee (S554)

<ol style="list-style-type: none"><li>1) Return Share does nothing to immediately benefit New Jersey. It only benefits those out of state manufacturers who have recycling programs in place.</li><li>2) Return Share unfairly benefits those manufacturers whose products, like computers, have reusable components or market life after use.</li><li>3) Return Share is not comprehensive; it will not cover all electronic waste being dumped into the waste stream.</li><li>4) Return Share is a promise to pay system; manufacturers may not be in business when waste is disposed.</li><li>5) Return Share hides the cost of recycling paid by the consumer; it is a hidden tax, equivalent to consumer fraud.</li><li>6) Return Share system is tested in Maine only. The results have been much less effective than the California ARF experience.</li><li>7) Return Share program will grow the size of state government.</li></ol>	<ol style="list-style-type: none"><li>1) Advance Recycling Fee is supported by electronic manufacturers with 30,000 employees in New Jersey.</li><li>2) Advance Recycling Fee puts all manufacturers on a level playing field.</li><li>3) Advance Recycling Fee is comprehensive covering not just computers but a wide range of electronic products.</li><li>4) Advance Recycling Fee generates real state revenues to build recycling infrastructure within the state and avoid cost to counties and municipalities.</li><li>5) Advance Recycling Fee allows the Legislature to set the absolute price paid by consumers, just as consumers now pay for recycling tires and batteries. It is a concept New Jersey consumers understand.</li><li>6) Advance Recycling Fee has been implemented and tested in California. Independent authorities have reviewed the California program and found it to be <u>the most effective recycling program</u>.</li><li>7) Advance Recycling Fee minimizes growth of state government but provides capacity to county and municipal governments to deal with recycling at the point of origin.</li></ol>
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**ADDITIONAL APPENDIX MATERIALS**  
**SUBMITTED TO THE**  
**SENATE ENVIRONMENT COMMITTEE MEETING**  
**February 8, 2007**

**Submitted by Frank Marella**, Manager, Corporate Environmental Affairs, Sharp Electronics Corporation:

“Who’s Doing Well by Doing Good,” *BusinessWeek*, January 29, 2007, pg. 53

**Submitted by Lloyd Hicks**, Director, Solid Waste Prevention Program, INFORM, Inc.:  
“A Review of California and Maine’s Electronics Recycling Programs,” INFORM, Inc.,  
Updated February 2007 ([www.informinc.org](http://www.informinc.org))