



Philips Electronics North America Corporation

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TESTIMONY ON ELECTRONIC WASTE  
BEFORE THE PENNSYLVANIA SENATE COMMITTEE ON ENVIRONMENTAL  
RESOURCES AND ENERGY  
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Philips Electronics is a member the Electronics Manufacturers Coalition for Responsible Recycling (Coalition). The coalition represents many of the largest consumer electronics companies in the world including JVC, Mitsubishi, Philips, Sanyo, and Sharp. We appreciate the opportunity to provide comments on Electronics Waste Recycling.

Summary

1. The Coalition agrees that states should establish a source of funding for electronics recycling.
2. The 2009 digital transition is not going to cause a significant increase in the number of television sets disposed.
3. There are significant differences between computers and televisions that result in a need for different approaches to achieve optimal results.
4. An approach that focuses on return share rather than current share puts established manufacturers at a significant disadvantage to new Chinese manufacturers who have no return share and who do not make the investments in environmental improvements that established manufacturers make.
5. Experience and financial analysis shows that producer responsibility approaches would not provide an incentive to manufacturers to make better products and which manufacturers cannot pass on these costs adversely affecting higher cost but more innovative established manufacturers.
6. Pennsylvania should establish a television recycling system based on shared responsibility. It should authorize a source of funding for the recycling of legacy televisions. Manufacturers would be responsible for operating the recycling systems and then funding the system to pay for the recycling of new televisions.

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. *The 2009 transition to digital television is not going to result in an increase in the disposal of televisions.*

In February 2009, television stations will end their transmission of over the air analog signals and only broadcast digital signals over the air. The US government is going to auction the frequencies used for over the air analog signals with estimates of the auction in the \$10-\$20 billion range. Some have argued that this transition is going to result in a sharp increase in the disposal of televisions because old analog televisions will no longer function. This is incorrect for four reasons:

- a. Federal law has required television manufacturers to include a digital tuner in sets manufactured after specified dates. Large televisions manufactured after February 2005, medium size televisions manufactured after February 2006 and small televisions manufactured after February 2007 all had to include digital tuners. This means that by February 2009 a sizeable number of televisions will have digital tuners.
- b. Most households (estimated at over 85%) receive television signals through cable or satellite transmission rather than over the air. Cable and satellite providers will continue to provide analog signals.
- c. The Congress had provided a minimum of \$1 billion to provide subsidies for the purchase of digital converter boxes for analog televisions. The National Telecommunications and Information Administration (NTIA) is implementing a program to provide each household with up to two \$40 coupons upon request after January 1, 2008 that are good towards the purchase of up to two converter boxes. The cost of the box is expected to be \$50-\$70.
- d. Video game systems, DVD players, VCRs, camcorders and other devices that connect to televisions will not be affected by the digital transition. In fact, a recent story in the New York Times says that cathode ray tubes can be better for gaming because many newer televisions cannot keep up with fast movements leading to image blurring. Joe Hutsko, "Not all HDTVs Can Keep Up With the Action," New York Times, August 30, 2007.

More information about the digital transition is available at [www.dta.gov](http://www.dta.gov), and [www.ntia.doc.gov](http://www.ntia.doc.gov).

3. *Differences between televisions and computers support that there should be differences in approaches to recycling these products.*

According to Dell's Global Recycling Policy for recycling computers, "Because of different challenges, TVs and other electronics are best addressed separately." Our Coalition agrees. The following are some of the significant differences between computers and televisions that argue for different approaches in addressing end of life issues:

- Sales channels: A significant number of computers are sold directly from manufacturers, who act as retailers, to users. Virtually all televisions are sold through retailers and manufacturers have no direct connection with consumers. These differences affect the net margins for each product and the ability of manufacturers to directly relate to consumers.
- Uses in commercial and office environments: A significant number of computers are used in the business environment whereas virtually all televisions are used in households. This use pattern also affects the ability to recover spent products.
- Product life expectancy: Televisions have an average useful life of 15-17 years. In a business environment computers may last only a few years and even for homeowner use of the average life of a computer is five or more years less than for a television.
- Residual value: The residual value of a computer is much greater than the residual value of the typical cathode ray tube that has been used for televisions until recently. That significantly affects the economics of recycling
- Current business economics: While there are competitive pressures in the computer industry, the competitive pressures in the television industry are much greater adversely affecting the ability of manufacturers to increase prices to pay for recycling. As an example, a recent report by the financial services company Morningstar, contains the following information:

"The rampant competition from value brands like Vizio and Westinghouse has undercut prices of brand names like Sony, Philips and Panasonic by as much as 40%...Sustaining healthy returns on capital in such an environment is almost impossible." "Flat Panels Have Poor Fundamentals," Morningstar, March 26, 2007.

These differences mean that an approach that might be efficient for computers are not likely to be efficient for televisions.

4. *An approach that focuses on return share rather than current share puts established manufacturers at a significant disadvantage to new Chinese manufacturers who have no return share and who do not make the investments in environmental improvements that established manufacturers make.*

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. A story in Newsweek International, January 23, 2006 says, “Prices are plummeting as more and more players jump into the game, many of them unknown names out of Taiwan and Mainland China.” 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.

And that is what has happened. According to ISupply, a company that provides market intelligence, in the second quarter of 2007 the number one manufacturer of LCD television sets sold in the US was Vizio, which had a market share of 14.5%. Two other new companies, Syntax-Brilliant and Westinghouse, had market shares of 6.1% and 5.5% respectively. That means that new manufacturers sold at least one-quarter of all LCD televisions sold in the quarter. [www.isupply.com](http://www.isupply.com). Vizio is a company that was started in 2002. It currently has 85 employees. Gary Gentile, “Upstart Maker Tops in Flat Panel TVs,” the Seattle Times, September 10, 2007.

Some of these new companies are using brand names of famous defunct companies:

“But as is the case with everything manufactured these days, China seems to be a hotbed of zombie brands. Brent Butterworth, editor in chief of Home Entertainment, notes that the brand names of Westinghouse and Polaroid, two once-proud blue chips that were titans in consumer electronics, have recently been applied to flat-panel TV sets made in China.” “Attach of the Zombie Brands II: More products that refuse to stay dead.” Daniel Gross, [Slate.com](http://Slate.com), March 20, 2007.

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.

The financial research firm, Morningstar recently summarized the result of this competition:

“Despite the explosive growth of flat-panel televisions, manufacturers are struggling to stay profitable. The downward spiraling of prices, which are expected to drop another 20% in 2007, is outpacing cost reductions as manufacturers vie for market share. The rampant competition from value brands like Vizio and Westinghouse has undercut prices of brand names like Sony, Philips, and Panasonic by as much as 40%. Thanks to the global supply chain, these value players have access to the same TV displays from Asian suppliers as their marquee competitors. Consequently, Vizio and Westinghouse can manufacture TVs as cheaply as anyone else. And since these firms have virtually no overhead and no expensive marketing campaigns, they can pass their costs savings on to consumers.” “Flat Panels Have Poor Fundamentals,” Research Report on Philips Electronics, Morningstar, March 26, 2007.

The overwhelming evidence is that new low cost Asian manufacturers are significantly undercutting established manufacturers prices and inhibit the ability of such manufacturers to increase their prices to pay for the costs of recycling.

In addition increased 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)

Producer responsibility return share 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.

Over the last year many states have recognized the harmful effect of a return share model. Oregon and Minnesota both provide for current share models for televisions and Connecticut revised its program to move from return share to current share for televisions.

5. *Arguments in Favor of Producer Responsibility Do Not Hold Up to Scrutiny*

Although manufacturers, retailers, government and consumers benefit from the sale and use of televisions, only manufacturers are being asked to pay for the cost of recycling.

Some argue that manufacturers should pay for recycling to create an incentive to design better products. This argument fails on two grounds:

a. Television manufacturers already have made significant design improvements without any such incentive. The television sold in 2008 is far superior to the average television sold in 1993 and being disposed in 2008. The 2008 television uses significantly less energy per screen size, weighs much less, uses much less packaging including elimination of PVC packaging and has eliminated use of virtually all lead. (See attached slide graphically showing improvements). Just last week the technology magazine CNET awarded Philips its “Best in Show” Award for our power saving Eco TV. (see attached story). In addition see the attached the lead story in the January 29, 2007 edition of Business Week Magazine 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 as one of the top-rated companies.

b. The average television life is 15-17 years. No one is going to redesign a product because it may result in lower recycling costs 15-17 years from now. Manufacturers need much shorter payback periods. In addition, there is no guarantee that any improvement made today would result in a decrease in recycling costs 15-17 years from now because of likely changes in the recycling of televisions. Recyclers are moving from hand disassembly to mechanical disassembly. This means that design changes to make manual disassembly easier are irrelevant in mechanical disassembly.

c. Even if there might be some incentive from requiring manufacturers to recycle televisions, that incentive would only apply to newly manufactured products. Products already manufactured and sold cannot be changed. Therefore there is no incentive from manufacturing legacy products. The Vice President of Best Buy made the following statement in his testimony before the House Energy and Commerce Committee in 2005:

"Through all of the voluntary efforts outlined above, we have first-hand knowledge of the fact that this issue is complicated. It may be helpful to the Committee to highlight one significant complication. There is the waste that is currently waiting to be recycled. There are the products that are still in use but will need recycling in the near future. Neither of these two categories of products – historic waste – was produced with the understanding that they would have to be recycled. And then there are the products that will be produced the future – future

waste. Finding a solution may require us to think about these two categories of waste separately."

6. *Television Manufacturer Proposal – Pennsylvania should establish a program for television recycling based on the concept of shared responsibility. This should include a consumer based funding source for a period to pay for the recycling of legacy Cathode Ray Tubes or authorize another source of funding for this purpose.*

Under shared responsibility, all the major stakeholders - manufacturers, retailers, government, non-governmental organizations (NGOs), recyclers and consumers - participate in efforts to establish a viable recycling infrastructure based on their unique expertise and capabilities. A 2006 US General Accounting Office report described the development of shared responsibility or extended product responsibility as follows:

"In 1996, the President's Council on Sustainable Development recommended an EPR policy which it defined much more broadly as the shared responsibility of government, consumers, and all industry actors in the product chain for all the environmental impacts of a product over its life cycle, with no emphasis on the producer's unique responsibilities or on the post consumer stage. In practice, the term has mostly been used to describe producer responsibility "post-consumer" —after products have been discarded at the end of their useful life."

(<http://www.technology.gov/reports/2006/Recycling/Beg-Apendix7.pdf>) Page 35.

In Europe the Directive on Waste Electrical and Electronics Equipment adopts such a shared responsibility approach. Under the Directive retailers and local governments are required to accept spent products from consumers. Manufacturers are responsible for actual recycling. But in countries with 2/3 of the European population the recycling is funded by a visible fee that is collected by retailers to pay for recycling.

Retailers, who benefit from the sale of televisions and associated products sold with televisions such as warranties, have no financial responsibility in their role as retailers under a producer responsibility system. Any responsibility they have is if the retailer also sells products under its own brand name and is in essence a manufacturer. They also have no collection responsibility as they do in Europe under such a system.

States significantly benefit from sales of televisions. Almost all states apply a sales tax on televisions as well as other products. Given the national wholesale value of televisions sold (estimated by the Consumer Electronics Association at \$25 billion for 2006), a conservative retail markup of 25%, Pennsylvania collects \$74 million in sales taxes on televisions every year. States receive this funding from consumers, who pay the tax, which is collected by retailers, who may not receive any reimbursement for this collection. Our coalition has suggested the same type of funding mechanism for recycling televisions. States also benefit from income taxes on employees involved in the sale and servicing of these products.

Local governments benefit from property taxes paid on retail stores.

Finally, the consumer benefits because the consumer can choose to purchase a television using either over the air signals, or cable and satellite programming. For a \$1,000 television

that lasts 20 year, a consumer pays only the equivalent of \$50/year for free over the air television.

Notwithstanding the lack of any incentive, television manufacturers have said they would be responsible for recycling newly made televisions and would be willing to run a program to collect legacy televisions. The only issue comes down to who collects spent televisions and funding the recycling of legacy (pre 2008) televisions. Cathode ray tube televisions have little to no economic value and are the biggest financial cost of recycling electronics by far. Newer flat panel televisions are likely to be cost positive at end of life.

We have supported an up-front fee to pay for legacy recycling as is provided by the WEEE directive in Europe and is being implemented in much of Canada and in California. Senator Williams has introduced a version of this bill. In Canada, five provinces passed laws requiring the entity that makes the first sale of the television in the province responsible for paying a fee on the product. This meant that both manufacturers and retailers would be responsible for paying such a fee. As a result, retailers voluntarily agreed to collect an established Eco Fee on televisions and other products with the funds being used by an industry organization to establish a program to recycle televisions and other electronics. The California Integrated Waste Management Board has concluded that the fee in California:

“Provides financial relief to local governments, provides cost-free recycling opportunities for consumers, educates illegal dumping, eliminated the consumer stockpile of waste monitors and TVs, and decreased the amount of hazardous materials in covered products”

Today California is collected over 5 pounds per person of covered devices, which is the highest collection rate in the nation.

A less desirable option but one that is currently being used in many Pennsylvania local jurisdictions is an end of life fee to pay for legacy recycling. There would be a limit the size of the fee (\$10), a limit the length of time we could use the fee (mid to late next decade), a prohibition on the charging of a fee for any product other than cathode ray tube televisions (that means free recycling for new flat panel televisions) and we would pay for an independent third party audit to ensure that all collected fees were used for recycling and did not benefit the manufacturers and that any excess collection would have to be paid to the state. Such end of life fees are also now used by some communities in Maine and Minnesota to pay for the costs of collection.

Another approach has been used in Arkansas and to a lesser extent in North Carolina and Colorado to increase tipping fees with funds used in whole or in part for electronics recycling.

Without some alternative source of funding for legacy products, manufacturers would have to eat the costs of the program. This comes at a time of significant problems for established manufacturers as documented by independent third parties. Please see the middle paragraph in the attached Merrill Lynch report showing that Philips loses money on television sales in the US and the reasons for those losses.

“Connected displays – which makes up ~60 of CE (consumer electronics) continues to lose (sic) money in the North American market driven by severe price competition, aggressive retail dynamics and disruptive low-cost players.”

If we are losing money with the cost structure we now have we will lose even more money by adding costs that we cannot recover. This is not an economically viable situation.

Unfortunately, the demonstration of this fact is that in April 2008 Philips Electronics announced that it was going to end the manufacture of consumer televisions in the US but of the unacceptable market conditions. Previously GE and Thomson have made similar decision and other companies will undoubtedly make the same decisions in the future.

### *Conclusion*

Our coalition is anxious to work with the Committee to fashion an effective and economically viable television recycling program.