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ELECTRONICS RECYCLING

States are struggling to deal effectively with the burgeoning volume of discarded consumer electronics, which can threaten both human health and the environment. With state budgets tight, recycling programs instituted by state or local governments have generally been funded by either consumers or electronics manufacturers.

Sixteen states currently have laws establishing statewide electronics recycling, or e-recycling, programs. Legislation in Wisconsin was introduced in the 2007-2008 session, but failed to pass.

This brief will examine the issue of electronic waste, discuss the Wisconsin legislation that was introduced, summarize current e-recycling laws in other states, and highlight national action on the issue.

THE ISSUE

Electronic waste – unwanted or obsolete computers, televisions, cellular phones, and other consumer electronics – poses a threat to the environment and to human health if disposed of in landfills or incinerated.

Though there is no standard definition, electronic waste, or e-waste, generally includes computers and accessories, televisions, cellular phones, fax machines, stereos, and video game systems. These components frequently contain heavy metals such as lead, mercury, and cadmium, and brominated flame retardants (BFRs) that can be harmful to humans and the environment.

The seemingly exponential proliferation of consumer electronics has made the issue of particular concern in the last decade. According to a 2006 survey by the Wisconsin Depart-

ment of Natural Resources (DNR), state households own about 3.8 million computers, 7.5 million televisions, and 3.5 million cellular phones. The DNR estimates the average shelf life of a computer at three years and found that only 20% of survey respondents planned to recycle broken or unused computers.

According to the U.S. Environmental Protection Agency (EPA), consumer electronics make up almost 2% of the municipal solid waste stream. The EPA estimates that the quantity of electronic waste generated continues to increase. In 1998, a National Safety Council study estimated that 20 million computers were becoming obsolete each year. In 2007, EPA estimates put that number at more than 40 million.

The vast majority (82%) of unwanted electronics are disposed of, primarily in landfills, according to the EPA, with only 18% being recycled.

In February 2009, television broadcasts will convert from analog to digital signals. Those using rooftop or “rabbit-ear” antennas will need to purchase a converter box or a television with a digital tuner in order to receive the digital signal. While older televisions can still be used after February 2009, it is estimated that the switch to digital will cause a larger-than-usual turnover in televisions.

STATES PASS ELECTRONICS RECYCLING LEGISLATION

States have taken the lead in passing e-recycling legislation due to a lack of federal regulation on the issue. Though the EPA regulates hazardous waste on the federal level, households and small businesses generally do not

generate enough waste to fall under its regulations.

WISCONSIN LEGISLATION

In January 2008*, Senator Mark Miller along with seven coauthors and 17 cosponsors introduced Senate Bill 397 which would have established a statewide electronics recycling program funded by electronics manufacturers. The bill passed the senate but failed to pass the assembly.

Major Provisions. Under the provisions of SB-397, manufacturers of video display devices marketed for home use would be responsible for collecting and recycling consumer electronics or arranging for collection and recycling to be done. The more electronics by weight that a manufacturer collected, the less "variable fees" it would be required to pay.

The bill established the following requirements for manufacturers of video display devices (defined as televisions or computer monitors with a tube or screen at least nine inches long diagonally): manufacturers must permanently label their products, they must inform the DNR if their products contain hazardous substances, and they must register annually with the DNR and pay annual fees.

Anyone collecting or recycling electronics would also be required to register with the DNR.

Manufacturers who failed to comply with the bill's requirements could face penalties or be prohibited from selling their products in the state.

The bill set targets for the amount of electronics that manufacturers were to collect for recycling. For the first year, manufacturers could avoid paying any variable fees if they collected and recycled electronics equal to 60% of the weight of the electronics they produced. In subsequent years, the target rate would rise to 80%.

Manufacturers who exceeded their recycling targets would receive credits which they

could use to meet targets in the next three years or sell to other manufacturers to be used to meet targets.

Manufacturers would not be limited to collecting their own products. They would receive credit for recycling various types of electronics regardless of whether they originally produced them.

Under SB-397 manufacturers could receive 1.5 times credit for electronics collected in rural areas and reported as such to the DNR.

Finally, manufacturers would be prohibited from charging consumers a fee when collecting electronics to be recycled.

A landfill ban was the second major component of SB-397. The bill prohibited disposal in landfills of televisions, computer monitors, computers and accessories, fax machines, DVD players, VCRs, and telephones with video displays. The bill also allowed the DNR to add additional devices to the list if it determined their disposal would be harmful to human health or the environment.

Legislative Action. On January 24, 2008, a public hearing was held on SB-397 and on March 5 the Senate Committee on Environment and Natural Resources voted 5 to 0 to adopt Senate Substitute Amendment 1 and Senate Amendment 1.

Senate Substitute Amendment 1. Senate Substitute Amendment 1 made a number of changes to SB-397. It expanded the landfill ban to include a ban on burning electronic devices in an incinerator. It also banned placing electronic devices in a container that would be taken to a landfill or incinerated. Penalties of \$50 for a first violation, \$200 for a second violation, and up to \$2,000 for a third or subsequent violation were set in Senate Substitute Amendment 1. The substitute amendment also required the operator of a landfill or solid waste treatment facility to make a "reasonable effort" to separate electronic waste and have it recycled.

*Corrected date.

The substitute amendment included annual and quarterly recycling targets for manufacturers and imposed annual and quarterly “shortfall fees” calculated by multiplying the amount of the shortfall by the estimated cost of recycling.

Senate Amendment 1 to Senate Substitute Amendment 1 added an exception to the definition of a “video display device” for any monitor that was a part of a larger piece of equipment used in an industrial, governmental, commercial, research and development, or medical setting. It also added an exception for devices used for security, sensing, monitoring, or antiterrorism purposes.

The senate adopted Senate Substitute Amendment 1 and Senate Amendment 1 and passed SB-397 as amended by a vote of 30 to 3 on March 12, 2008. The bill was referred to the Assembly Committee on Natural Resources on March 13, and subsequently failed to pass.

LEGISLATION IN OTHER JURISDICTIONS

As of September 2008, 16 states and one city have passed laws establishing an electronics recycling program. Fifteen states’ programs are funded by electronics manufacturers under an extended producer responsibility (EPR) model. Only one state, California, has an advanced recycling fee (ARF) program where consumers pay a fee when they purchase an eligible product.

Each state with an e-recycling program has its own set of rules regarding who can provide electronics for recycling, what types of products are covered, and the exact method of financing the program.

Some state laws limit the use of e-recycling programs only to “consumers” or “households.” Other states limit the number of electronics devices that a person can drop off at one time, but open the program to small businesses and nonprofits.

The scope of products covered differs from state to state. The most common electronics accepted for recycling under state programs include computer monitors, personal computers and peripheral devices, and televisions. Some states, however, accept only computer-related components and not televisions.

Programs in all states but one are financed by manufacturers, but there are differing ways of calculating how much manufacturers must pay. In some states, manufacturers pay a flat fee that is used to fund the recycling program. “Market share” models in other states charge manufacturers based on the amount of products they produce and sell. “Return share” models charge manufacturers based on the amount of their products that are turned in for recycling. Some states use a blend of market share and return share models.

At least three states ban some electronic waste from landfills but lack a statewide recycling program. Conversely, seven states with a statewide recycling program do not have landfill bans.

The rate of states adopting statewide electronics recycling bills appears to be increasing. Between 2003 and 2006, four states passed e-recycling laws. In 2007 and 2008, 12 states and New York City passed laws.

New York City passed a two-part electronics recycling law in April and May 2008. Citing electronic waste as “one of the fastest growing and most hazardous components of the City of New York’s waste stream,” the City Council established a citywide recycling program funded by electronics manufacturers and a landfill disposal ban in April 2008. The second part of the law, passed over the mayor’s veto in May, establishes fines for electronics companies if they fail to recycle a stated amount of electronics.

At least 10 states, including Wisconsin, considered electronics recycling bills during the most recent session.

Federal Activity. During the 2007-2008 session, the U.S. Congress considered but failed to enact HR 223, which would have established a national advanced recycling fee of \$10 for consumers purchasing electronics, such as monitors and computers. Under the bill, the EPA would use the collected fees to fund recycling programs.

In March 2008 the bipartisan E-Waste Working Group, comprised of eight members of congress, released a “Concepts Paper” setting out the goal of establishing a national e-recycling program and seeking comment from interested parties.

In April 2008, the House Committee on Science and Technology held a hearing on electronic waste and heard testimony from industry, recyclers, academics, and nongovernmental organizations.

National Electronics Product Stewardship Initiative. Between 2001 and 2004, representatives from electronics manufacturers,

government agencies, environmental groups, recyclers, and other interested parties formed the National Electronics Product Stewardship Initiative (NEPSI) in order to develop a plan for a national electronics recycling program. The group sought to find common ground on financing a program, maximizing recycling of e-waste, encouraging more efficient product design, and reducing the toxicity of electronic products.

NEPSI failed to come to a consensus because of a disagreement over whether a national recycling program would be funded by consumers (ARF) or by manufacturers (EPR).

With a national program seemingly stalled, states began to legislate e-recycling programs.

The following table presents the states with e-recycling programs and includes basic details of each program.

STATE LAWS ON ELECTRONIC WASTE COLLECTION AND RECYCLING – AUGUST 2008

State	Law Adopted	Effective Date	Landfill Ban	Program Funding Mechanism*	Code/Statutes
California	2003	January 1, 2005	Yes	Advanced Recycling Fee	Public Resources Code 42460-42486
Connecticut	2007	January 1, 2009	Yes	Extended Producer Fee	Public Act No. 07-189
Hawaii	2008	January 1, 2010	No	Extended Producer Fee	Special Session 2008 Act 13
Maine	2004	January 1, 2006	Yes	Extended Producer Fee	Title 38, Chapter 16, Maine Statutes
Maryland	2005	July 1, 2005	No	Extended Producer Fee	Sections 9-1727 to 9-1730, Maryland Code
Minnesota	2007	August 1, 2007	Yes	Extended Producer Fee	Chapter 115A, Minnesota Statutes
Missouri	2008	July 1, 2009	No	Extended Producer Fee	Sections 260.1050 to 260.1101, Missouri Statutes
New Jersey	2008	January 1, 2009	Yes	Extended Producer Fee	Chapter 347, Public Laws 2007
North Carolina	2007	January 1, 2009	Yes	Extended Producer Fee	Solid Waste Management Act of 2007 (SL 2007-550)
Oklahoma	2008	January 1, 2009	No	Extended Producer Fee	Sections 2-11-603, Title 27A, Oklahoma Statutes
Oregon	2007	January 1, 2009	Yes	Extended Producer Fee	Sections 459.247 and 459.995, Oregon Revised Statutes
Rhode Island	2008	January 1, 2009	Yes	Extended Producer Fee	Title 23, Chapter 24.10, General Laws of Rhode Island
Texas	2007	September 1, 2008	No	Extended Producer Fee	Chapter 361, Subchapter Y, Health and Safety Code, Texas Statutes
Virginia	2008	July 1, 2009	Yes	Extended Producer Fee	Title 10.1, Chapter 14, Article 3.6, Sections 10.1-1425.27
Washington	2006	January 1, 2009	No	Extended Producer Fee	Chapter 173-900, Washington Administrative Code
West Virginia	2008	July 1, 2009	No	Extended Producer Fee	Sections 22-15A-24 to 22.15A-29, West Virginia Code
Arkansas	2005	January 1, 2010	Yes	----	Sections 25-34-101 to 25-34-111, Arkansas Code
Massachusetts	2000	April 1, 2000	Yes	----	310 CMR 19.017
New Hampshire	2006	July 1, 2007	Yes	----	Sections 149M:4 and 149-M:27,

*Advanced recycling fee is a fee paid up-front by the consumer. Extended producer fee is a fee paid by the manufacturer of the product.
 Sources: Congressional Research Service, *Managing Electronic Waste: An Analysis of State E-Waste Legislation*, September 10, 2007; National Conference of State Legislatures, “Reduce, Re-Use and Recycle: Managing E-Waste,” *LegisBrief*, Vol. 16, No. 23, April/May 2008; “Comparisons of State E-waste laws,” at: e-takeback.org, July 2008.