

# Television in Transition

The switch to digital TV broadcasts has state lawmakers concerned that old sets will flood landfills.

BY TAMRA SPIELVOGEL

**T**he analog world is headed for the dustbin of history, at least when it comes to television.

On Feb. 17, broadcasters in the United States will turn off transmission of analog signals and broadcast only digital signals. Most people will not be affected

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because they receive their TV service from a cable or satellite provider or they have a newer television capable of receiving digital signals over the air.

About 13 million households that receive only analog TV signals through rabbit ears or a roof-top antenna, however, must buy a box that will take in digital signals and convert them to analog signals, buy a new digital TV, or sign up for cable or satellite service.

The digital transition could spur millions

of consumers to swap their old analog sets for new digital ones. State officials are concerned the sets may end up in local landfills that are ill-prepared to handle them. Americans already dispose of millions of TVs every year—nearly 27 million in 2007. Fewer than 20 percent are recycled.

“From an environmental standpoint, legislators need to keep in mind not all citizens will be thinking about recycling those old TVs,” says New Jersey Assemblyman Reed

## CONVERTER BOX PROGRAM KEY TO DIGITAL SWITCH

It's off to the electronics store for consumers who have TV sets with rabbit ears or a rooftop antenna.

After Feb. 17, if they don't want to sign up for cable or satellite service, they'll need to either buy a converter box or a new TV.

That's because Congress enacted the Digital Television Transition and Public Safety Act in 2005, which mandated that most television stations stop analog broadcasts and switch to digital. The move is aimed at providing state and local emergency responders with an adequate spectrum to communicate and respond to natural disasters or terrorist attacks. Digital broadcasts use smaller segments of spectrum than do analog broadcasts, and that means the switch to digital will free additional space for public safety agencies and the private sector. The government also auctioned off a portion of the freed up space to cell phone companies, which brought in nearly \$20 billion.

There's been a massive education campaign to help prepare consumers for the



transition. A key component is making sure consumers understand they don't have to buy a new TV. The converter box will change the digital signal to an analog signal that older sets can use.

But converter boxes will increase energy use. The Environmental Protection Agency estimates the new boxes could consume more than 3 billion kilowatt hours per year and cost Americans \$270 million, although that cost will be less if people buy boxes that meet the Energy Star program's strict

energy-efficiency standards.

To help consumers with the analog-to-digital transition, Congress created a program that allows households to apply for two \$40 coupons to offset the cost of converter boxes, which sell for about \$60. However, the program ran out of money in early January and new applicants are being put on a waiting list.

 **CHECK OUT** where you can order coupons for digital converter boxes at [www.ncsl.org/magazine](http://www.ncsl.org/magazine).

Gusciora. Many TVs may end up in landfills where their toxic chemicals will pollute the ground and water, he says.

Electronic waste, or e-waste—including televisions, computers, cell phones and monitors—is the fastest growing waste stream in the country. The United States produces more than 2.5 million tons of it a year. Rapid advancements in technology have led many consumers to adopt the latest devices and throw away the old ones.

In recent years, there has been a growing focus on how to handle discarded electronics. The sheer volume of devices alone raises concern for state and local governments. But televisions and other electronic devices—especially older models—often contain harmful metals and chemicals such as mercury, cadmium and brominated flame retar-

dants. The cathode-ray tubes (CRTs) used in older televisions and computer monitors are of special concern because they contain cancer-causing materials, including lead, barium and other heavy metals that can contaminate the soil, water and air.

### WHY THE SWITCH MATTERS

The issue concerning state lawmakers is what happens to the millions of sets consumers no longer want. The Environmental Protection Agency estimates that only about 18 percent of e-waste is collected for recycling.

In addition, the agency estimates that in 2005 approximately 61 percent of CRT monitors and televisions collected by recyclers were sent abroad. EPA passed regulations to stem the exports, but a 2008 Government Accountability Office report said a substantial amount of e-waste still “ends up in countries where disposal practices can harm workers and the environment. Electronics exported from the United States to many Asian countries are dismantled using methods like open-air incineration and acid baths to extract metals such as copper and gold.” The report also found that U.S. companies

get around the EPA rules and that agency enforcement was lax.

Assemblyman Gusciora has kept an eye on the coming change for some time. He notes the transition played into the Legislature's desire to implement the state take-back program—requiring manufacturers to establish a collection, transportation and recycling system for discarded computers and televisions—as soon as possible. Manufacturers also must pay a registration fee to fund the program and pay processors to recycle used electronic devices.

“There will no doubt be a whole generation of TVs discarded, and we want to be as prepared as we can be,” Gusciora says.

Seventeen states—California, Connecticut, Hawaii, Illinois, Maine, Maryland, Minnesota, Missouri, New Jersey, North Carolina, Oklahoma, Oregon, Rhode Island, Texas, Virginia, Washington and West Virginia—have e-waste programs, and 11 of them include televisions. But getting them off the ground is a major hurdle because many of the state programs have been enacted only during the last two years. Some states offer recycling throughout the state, while others have only a few sites.



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## HOW BIG IS THE PROBLEM?

Since CRTs are the second largest source of lead in landfills after lead-acid batteries (that are now banned), the question for states concerned about the digital switch is: How many additional TVs will be dumped?

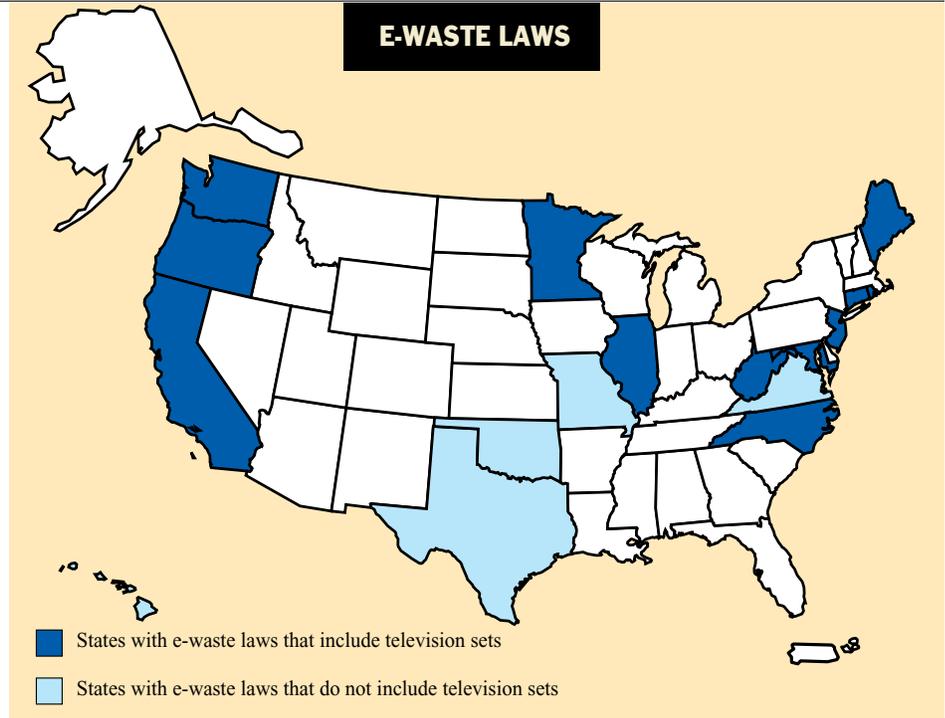
Tim Herbert, senior director of market research for the Consumer Electronic Association, believes it may not be as big a problem as some fear. A study released by the association indicates people will get rid of about 15 million TVs through 2010, 95 percent of which will be sold, donated or recycled.

“Consumers are far more likely to recycle, reuse, give away or sell analog TVs than throw them away,” says Herbert.

Indeed, anecdotal accounts from electronics recycling programs indicate that in the past year people have been recycling older televisions in greater numbers.

“This upswing is clearly driven by consumer demand for newer video display technology, not the digital transition,” says Parker Brugge, vice president of environmental policy and industry sustainability for the electronics association. “Existing state and voluntary programs by Sony, Samsung, LG, Best Buy and others are currently managing this upswing in the demand for recycling services and are well-equipped for any additional upswings in 2009 and beyond.”

The organization’s research also indicates that 87 percent of consumers believe recycling electronic products is important. Many are turning to websites such as earth911.com and mygreenelectronics.com for lists of local e-waste recyclers.



Some experts think the flood of e-waste will be stemmed somewhat by the government-subsidized converter box program. The boxes will extend the life of older analog TVs.

But according to Barbra Kyle of the Electronics Takeback Campaign, “One problem is that the converter boxes get you a digital signal, but they don’t get you a high-definition signal. Once people have to make a change, they decide to make the switch to a digital TV that also gets a better picture.”

While the digital switch has put a spotlight on the issue of e-waste, many believe this is just one piece of a larger puzzle. A wide range of experts continue to advocate cradle-

to-grave management of televisions, computers and other electronic devices, which involves the manufacturer in a system to ensure electronics will be properly recycled. Increased attention at the state level is helping to drive forward that effort, which will continue long after Feb. 17.

“This is part of a trend of new technology driving product obsolescence,” says Kyle. “So states that pass take-back laws this year can still have a very positive impact on this problem.”

 **CHECK OUT** more information on the digital transition at [www.ncsl.org/magazine](http://www.ncsl.org/magazine).