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Electronic Waste Legislation and Economic Development

House Bill 1942, if passed, would require electronics manufacturers to plan for and finance collection and recycling systems for computers, cell phones, and televisions. This bill would be a boon for Washington's economy in the following ways:

It would create thousands of new jobs by 2010.

It would attract new businesses to Washington State.

It would provide job-training opportunities to youth and low-income workers.

It would return valuable materials to industrial commerce.

This paper explains each of these benefits to Washington's economy in more detail.

Job Creation

Recycling creates new jobs. The Institute for Local Self-Reliance estimates that nationwide, 296 jobs are created for every 10,000 tons of computer waste generated annually (Institute for Local Self-Reliance, 2002a). Using methodology developed for the Washington Department of Ecology, Cascadia Consulting Group estimates that by 2010, Washington households and Small Quantity Generators will generate 49,000 tons of obsolete computers and televisions. If an e-waste take-back program were in place by 2010 and all of the material was recycled, approximately **1,200 new jobs** would be created.

Similarly, the 2002 Statewide Recycling Survey shows that 1,414 tons of "computers and parts" were recycled in Washington State last year. Raw data from the 2001 Survey of Washington State's Recycling Industry indicates that approximately 40 people were employed statewide to recycle this material. Using these figures, one can estimate that in Washington State, approximately 40 jobs are created per 1,000 tons of "computers and parts" recycled. If all 49,000 tons of computer waste were recycled in 2010, approximately **2,000 new jobs** would be created.

In contrast, incineration and landfill of general waste creates only 1 job per 10,000 tons per year (Institute for Local Self-Reliance, 2002a).

Anecdotal evidence supports these figures. Image Microsystems, Inc. recently signed a contract with Dell to recycle e-waste. An article from the *Nashville Business Journal* reports that that contract prompted Image Microsystems to hire over 100 people (Nannie and Higginbotham, 2003).

Legislation requiring the removal of hazardous components from e-waste and preparation, as a commodity (prior to export) will create even more local jobs and business opportunities.

New Businesses Attracted to Washington State

Recycling is a growth industry. Between 1967 and 2000, the recycling industry sustained an 8.3% growth rate annually in the number of jobs, and a 12.7% growth rate in annual gross sales. In comparison, total US employment grew by only 2.1% annually during the same period, while compound annual growth of the fast-

food industry was 11% and the health care industry was 10.3% (Institute for Local Self Reliance, 2002b). The International Association of Electronics Recyclers believes that this growth will continue, given the tremendous amounts of e-waste generated nationwide. In fact, the Association estimates that the electronics recycling industry will grow its capacity by a **factor of 4 or 5 by 2010** (International Association of Electronics Recyclers, 2003).

Electronics recyclers are watching the progress of HB 1942 closely. One company, United Recycling Industries, Inc., has indicated willingness to build a **new facility** in Washington State should the bill pass:

> If Washington's law comes with NEPSI-style ESM requirements to level the playing field, it would make United Recycling Industries™ a highly potential player and possibly attract us toward putting a consolidation/separation/eventually-test-and-resale? facility in Washington (Roman, 2003b.)

In fiscal year 2002-2003, United Recycling Industries™ processed about 34 million pounds – 17,000 tons – of e-waste with about 100 employees (Roman, 2003a). Washington State households and Small Quantity Generators generated almost 40,000 tons of e-waste in 2002 (Cascadia Consulting Group, 2003); all Washington needs to do to attract businesses like United Recycling Industries™ is guarantee them a supply of e-waste and a level playing field.

Other states have recognized the potential of e-waste recycling to boost their economies. West Virginia just concluded a trade mission/joint conference on this subject with the Basque Government of Spain. A US Senator and Representative also attended this mission. West Virginia has received federal funds to establish the Polymer Alliance Zone, which is in the process of developing an e-waste recycling and processing industrial/technology park. Oregon has assigned its Department of Community and Economic Development the responsibility of overseeing its e-waste process (Jackson, 2003). The State of Minnesota estimates that should a statewide e-waste recycling program be implemented, approximately 400-500 new jobs would be created at de-manufacturing and initial processing facilities in Minnesota (Hickle, 2003).

Job-Training Opportunities and Closing the Digital Divide

Seattle Goodwill operates an employment and training program that provides low-income workers with basic computer skills. Ninety-five percent of participants live in poverty; sixty-nine percent support children. Ninety percent have never used a computer. Goodwill's program trains participants in the computer skills that they need to obtain – and keep – jobs (Seattle Goodwill, 2003).

However, this program costs money to run, and recently, e-waste has been draining the program's resources. Here's why: because people are unwilling to throw e-waste in the trash, they take their obsolete computers, televisions, and other electronics to Goodwill. Goodwill, however, no longer accepts these items, because no one wants to buy obsolete electronics, much of the donated e-waste is beyond refurbishment, and it's expensive to dispose of properly. As a result, Goodwill employees often arrive at work in the morning to find e-waste abandoned on their doorstep – and the charity is stuck with the disposal costs. In fiscal years 2001-2003, Goodwill spent $42,000 on disposing these illegally dumped electronic items – money that could have been spent on its workforce development or adult basic education programs. Goodwill estimates that in fiscal year 2003-2004, they will be forced to spend approximately $20,000 on these disposal costs (Hatch, 2003).

In addition, if viable e-waste recycling programs such as that proposed in HB 1942 were available, Goodwill could accept e-waste, refurbish it when possible, and sell these refurbished items to raise funds for its job training programs. Usable units could also be provided to youth and low-income workers who could benefit from them. The charity could recycle, at no cost, those items that are no longer useful.

Return Materials to Industrial Commerce

E-waste has been called a gold mine. The United States Geological Survey recently published a report stating one metric ton of e-waste from personal computers contains more gold than that recovered from 17 tons of gold ore. The report also includes information on the amounts and types of valuable materials recovered from recycled e-waste, including precious metals (gold, silver, and the platinum group metals), glass, plastic, and other metals, including aluminum, steel, lead and copper. Plastics from computer casings can be reused, or melted down and used as feedstock for new products. In 1998, American electronics recyclers recovered more than 6,500 tons of plastics. Although mixed plastics are worth little, prices for cleaned and separated plastics can range from $265/ton for flaked polypropylene to $900/ton for pelletized acrylonitrile-butadiene-styrene (United States Geological Survey, 2001). Returning these materials to commerce not only creates jobs and ensures the availability of needed industrial feedstocks, but does so without the environmental damage often attributed to primary resource extraction industries such as mining.

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