

## FROM THE BIG HOUSE

## TO THE TOP OF THE E-SCRAP HEAP

What is the process like for workers getting their start in an electronics recycling facility? How are they trained and educated about their job? This article shows one plant's approach in turning ex-convicts into expert e-cyclers

BY JULIE RHODES

**S**itting in a small section of the 49 acres that once housed RCA's television manufacturing facility in Indianapolis, electronics are coming full circle at Workforce, Inc's Recycle Force program. The program began in January 2006 with two employees at this location, at a time when the neighborhood was deteriorating along with the nearly-vacant building. Today, Workforce employs 57 people, 53 of who have been to prison for various felony convictions and are on probation. What some might consider a challenging workforce manages to operate a successful recycling non-profit. They process about 100,000 pounds of materials a month, the majority of which are electronics, though they also handle cardboard, plastics, metals and glass.

### Tools of the trade

Workforce founder and executive director Gregg Keesling attributes the success of the program and its unique staff to the

organization's emphasis on a comprehensive support effort. "We can't make it about production alone, and have to balance production with the development of the individual," said Keesling.

Recycle Force handles desktop and laptop computers, monitors, cell phones and other materials that require special handling due to potential hazards or sensitive information contained therein. Materials collected receive proper handling, recording and tracking from the point of pick-up or drop off, until the deconstruction process is complete. The items are degaussed, if needed, demanufactured and shredded in preparation for sale to secondary markets. Steel is sent to markets in Indiana; aluminum, copper and cardboard are marketed regionally; and plastics and circuit boards are sent to export markets.

The Recycle Force program uses a variety of equipment from power drills to 6,000-pound forklift trucks for material handling and demanufacturing. The organization also recently became the first Indiana company and among only a handful in the U.S. to use an E-Vantage 150 Separator System made by

RRT Design & Construction. The fully-automated system has been nicknamed the “BEAST” – short for “Breaking Electronics and Shredding Technology” – by Workforce staff for its large size and its ability to effectively shred materials, including CRTs, into half-inch to four-inch chunks that are easily boxed in Gaylords for shipping to market. The \$860,000 investment provides Workforce the opportunity to increase its capacity for recycling commodities by ten times their former throughput, and can process non-ferrous metals, such as copper and aluminum, plastics and circuit boards. Ferrous metals are pulled out with a magnet during shredding and other materials are separated by hand and placed in Gaylord boxes after shredding.

The E-Vantage system enables Workforce to process CRT and other glass twice weekly, with additional health and safety precautions taken during those processing times. Four employees are trained to run the glass through the machine, which includes a sophisticated dust collection system. In addition, a heavy manual cleanup is done after each glass run with a special vacuum to collect any additional lead glass fines that might be generated from the process. Workforce consistently meets air quality standards set by the Indiana Department of Environmental Management (IDEM) registering at 0.02 parts per million.

The organization's employees remove circuit boards from printers, scanners and copiers by hand to retrieve the high-value gold and silver, before running the large units through the BEAST.

Some clients inquire about the security of the data on units that go to Workforce. In many cases, clients remove their own hard drives prior to giving the units to the organization for recycling. However, the staff also is able to remove, degauss and shred hard drives should they be left in the unit. Part of the security protocol includes one dedicated staff person collecting hard drives every 15 minutes and storing them in an isolated, secured area. The rare earth metals contained in the hard drives are highly sought-after by overseas markets and other manufacturing industries.

## Making it work

The formula that makes the economics work for this organization includes increasing material throughput to reach economies-of-scale and utilizing federal and state training and employment funding that incentivize the hiring of the ex-offender population.

The organization accepts most materials free-of-charge, and even offers free scheduled pick-ups to some businesses. They do charge the general public \$10.00 for CRT devices over 27-inches, and \$5.00 per unit under that size. However, they also have a policy to accept any units in the event someone is unable or unwilling to pay in an effort to avoid the units being illegally dumped.

Workforce manages all of the electronics that are dropped off through the city of Indianapolis' e-Cycle program and is paid at least \$0.07 a pound or half the value (whichever is greater) for that material. The organization also partners with the Indianapolis Sustainability Award-winning group, Green Piece Indy, to collect materials at Rush Hour Recycling events – events held in convenient locations across the city to collect electronics and other recyclable materials during the morning rush-hour commute – as well as materials collected from an annual post-holiday collection event.

Workforce also attributes a portion of its success to Indiana's e-scrap law. Effective July 1, 2009, Indiana was the 19<sup>th</sup> state in the nation to pass its own electronic producer responsibility legislation, which has provided the organization with a boon. The new law has made it possible for Workforce to participate in electronics recycling on a larger scale. Manufacturer credits make up about 20 percent of the organization's income, with that percentage expected to increase as the program matures.

## Safety first

Workforce acknowledges that some of the training they provide for employees involves basic life skills, but it is simply incorporated into the work they perform. The organization has even developed an ISO Certification for policies uniquely related to managing ex-offenders. For instance, one such certification relates to how the facility handles visitors to the facility with children, given that nearly every employee has a criminal record.

“We have developed standards for safety, baling machines, the BEAST, time cards, hazardous materials management, hard drive management and are the first in the country to create a standard like this for ex-offenders,” said Zanda Baker, Workforce's ISO Auditor.

In many ways, the orientation and training process for new employees at Workforce is very similar to other electronics recyclers. Getting off to a good start with

new employees is vital to the growth and development of the organization.

The orientation process takes a three-pronged approach that includes tools orientation and application; personal protection equipment (PPE); and training and workplace safety to meet requirements set forth by the Occupational Safety and Health Administration, the U.S. Environmental Protection Agency and the state's environmental regulatory agency, IDEM.

The employee orientation process begins with a two-to-six hour orientation from their employee specialist and operations manager. Each employee's first day on the job consists of an assignment of tools and on-the-job training for proper application.

Each worker must go through phased training in each department, including sorting, demanufacturing, baling, flat screen disassembly and printer disassembly. As the employee hones their skills in these beginning departments, they can then advance to training and staffing other areas.

Workers are also required to go through a hazardous communication, hazardous materials management, forklift, person protection equipment (PPE) and LockOut-TagOut certification training during the process of the six months to be qualified or considered to work in the shipping and receiving department. To date, employees at the organization have earned over 430 certifications.

## The net effect

Workforce is taking a risk on individuals who often find it impossible to find employment. However, Keesling and others believe it is worth it to provide meaningful training and employment for those who have been incarcerated.

Frank Burgett, a Workforce employee who previously served 11 and one half years in prison is grateful for the opportunity. “Workforce is creating awareness about seeing ourselves as a whole person and recognizes our efforts and struggles to get back on track,” said Burgett. “They provide an atmosphere for work, where individuals are going through the same struggles and can provide support for one another.”

Four hundred ex-offenders have been trained and employed to recycle electronics in the past five and a half years through the Recycle Force program. Of those, 68 individuals have moved into permanent employment, a dozen of whom moved on to recycling-related jobs.

Compared to traditional offender

release programs, Workforce boasts only a 33-percent recidivism rate, compared to the county average of 52 percent. The national average of former convicts who typically return to prison after being released is 70 percent. At an estimated \$25,000 annual cost currently spent by the Indiana Department of Corrections, per inmate, Workforce estimates saving at least \$2 million in prison costs to date. And, the organization creates jobs that pay an average of \$9.00 an hour, contributes to local, state and federal taxes and its workers spend money in the community.

With \$2 million in gross wages paid to date, that translate to over \$300,000 in taxes paid and nearly \$70,000 in child support payments made. With these kinds of numbers to share, Workforce begins to make

a good case for social enterprise through recycling. The organization recently caught the attention of the U.S. Department of Labor, which is seeking to study more closely how a transitional job program like Recycle Force could be helping to solve the prison recidivism problem across the country.

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