



The Nebraska Product Stewardship Coalition

was formed by Keep Nebraska Beautiful, WasteCap Nebraska, the Nebraska League of Municipalities, the cities of Lincoln and Omaha and the Product Stewardship Institute in 2010. The mission of the Coalition is to shift Nebraska's product waste management system from one focused on government funded and ratepayer financed waste diversion to one that relies on producer responsibility in order to reduce public costs and drive improvements in product design that promote environmental sustainability. The Nebraska Product Stewardship Coalition works to integrate the principles of product stewardship into the policy and economic structures of Nebraska.

Contact Us

Gene Hanlon, Nebraska Product Stewardship Coalition

ghanlon@lincoln.ne.gov
(402) 441-7043

Scott Cassel,

Product Stewardship Institute
scassel@productstewardship.us
(617) 236-4855

Nebraska Electronics Take-Back Programs: Benefits and Best Practices

Why does Nebraska need an electronics take-back program?

- Nationally, **more than half** of discarded electronics are being sent to landfills and waste to energy facilities instead of being recycled; in Nebraska that rate is **more than 90%**.¹
- Nebraskans sent more than **18,000 tons** of E-waste to landfills at a cost of **over \$723,000** in 2015.²
- Over **14,000 tons** of e-waste remain in storage in Nebraska.³ This e-waste will cost Nebraska around **\$555,600** to dispose of.⁴
- CRT TV's & Computer Monitors disposed in Nebraska in 2014 contained **1,454,391 lbs** of lead. Toxics found in electronics, like lead, mercury, cadmium & brominated flame retardants, can contaminate soil & water supplies and contribute to the rising incidence of many illnesses, increasing health care costs.⁵
- More gold can be recovered from **1 metric ton** of used PC's than from **17 tons** of gold ore.⁶

What are the financial and economic impacts of electronics recycling?

The U.S. electronics recycling industry is a substantial economic force with **\$20.6 billion** in industry revenue and supports **45,000 jobs** in the private sector.⁷



Jobs

- Electronics reuse and recycling can create up to **1 job per 86 tons** processed and remanufactured.⁸
- In Washington, electronics take-back programs support **330 collection sites and 125 jobs**.⁹
- In Connecticut, electronics take-back programs support **80 jobs**.¹⁰

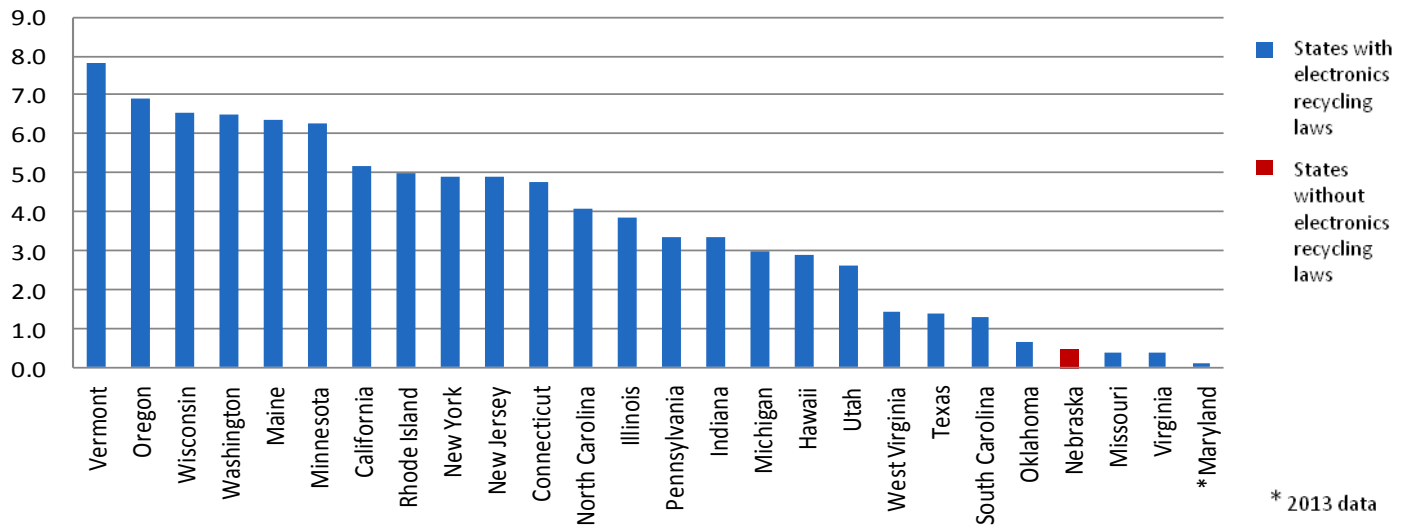
Investment and Business Development

- Since Washington and Oregon implemented their electronics take-back program, **three new** processing/recycling facilities have opened.¹¹
- By implementing a take-back program, Nebraska would be supporting **over 20 electronics recyclers** already in the state and open the doors for industry growth.

Financial Savings

- Municipalities in Connecticut **saved more than \$500,000 per year** in disposal cost savings, and received recycling services worth **\$4.4 million at no cost**.¹²

Pounds of E-scrap Collected per Capita by State, 2014



Note: This chart presents available data on program performance, but does not provide an “apples to apples” comparison as the covered products and entities (e.g., residents, businesses, schools, etc.) vary from state to state.

Source: PSI analysis of ERCC data, 2016

What does Nebraska have to gain from an electronics take-back and recycling program?

- **SAVE \$457,882** annually on landfill costs
- **GAIN 163 jobs:** 63 direct jobs and 100 remanufacturing jobs¹³
- **SAVE 51,101 kg CO₂** in green house gas emissions¹⁴
- **FUEL a potentially \$121.6 million** recycling industry in Nebraska¹⁵
- **ELIMINATE almost 4,000 lbs** of lead from landfills annually¹⁶

Works Cited

1. “Advancing Sustainable Materials Management: 2014 Fact Sheet”. EPA, November 2016. To determine the amount of electronics recycled in Nebraska, PSI surveyed the e-scrap recyclers in the state.
2. 18,710 tons x \$39.64 per ton average Nebraska tipping fee. Average landfill tipping fees provided by Environmental Research and Educational Foundation from a 2016 study.
3. Consumer Technology Association, 2016
4. Based on a \$39.64 average Nebraska state landfill tipping fee, Environmental Research and Educational Foundation, 2016.
5. The EPA estimates 58.3% of electronics at end-of-life in 2014 are CRTs (EPA, November 2016). CRTs dumped in NE landfills in 2014: 18,710 tons x .583 = 10,908 tons CRTs. Average weight of a CRT monitor/TV is .03 tons or 52.39lbs (EPA, May 2011). There are 48 lbs of lead in a CRT monitor/television. We’ve used 4lbs for this calculation. 10,908/.03 = 363,598 CRT units x 4 lbs lead = 1,454,391 lbs of lead disposed in Nebraska landfills in 2014
6. “Obsolete Computers, “Gold Mine”, or High-Tech Trash? ” Resource Recovery from Recycling” Fact Sheet. U.S. Geological Survey, Jul 2001
7. “Electronics Scrap” Institute of Scrap Recycling Industries Inc, year. <http://www.isri.org/recyclingindustry/commodities-specifications/electronic-scrap#.WFIOd1M rLcu>
8. “Jobs Through Electronics Recycling” Coalition for American Electronics Recycling, 2013. http://www.ecsrefining.com/Media/Default/Industry_Reports/CAER_Jobs_Study_Report_-_January_2013.pdf
9. “E-Cycle Washington Turns 5” Infographic, year. <http://productstewardship.net/sites/default/files/Docs/electronics/e-cycle-5-year-infographic.pdf>
10. “Connecticut Extended Producer Responsibility Program Evaluation: Summary and Recommendations” Product Stewardship Institute, October 2016
11. Preliminary Analysis of E-cycle Programs in Washington and Oregon”, Northwest Product Stewardship Council, March 2011.
12. “Connecticut Extended Producer Responsibility Program Evaluation: Summary and Recommendations” Product Stewardship Institute, October 2016
13. Nebraska collection level goal of 5.5 lbs per capita would equal approximately 5,000 tons. Direct Jobs calculated using 12.6 jobs per 1,000 tons average achieved in Oregon and Washington. Indirect jobs calculated using 20 jobs per 1,000 tons cited in “More Jobs, Less Pollution: Growing the Recycling Economy in the U.S.”
14. PSI analysis using EPA’s Electronics Environmental Benefits Calculator
15. Scaled \$20.6 billion national industry to the Nebraska population based on 2014 census data
16. PSI’s analysis of E-Scrap News, 2014