The State of the U.S. Electronics Recycling Industry

Eric Harris – ISRI
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Presentation Overview

- ISRI Overview
- Survey Project and Methodology
- Company Profiles/Inputs
- Industry Inputs
- Economic Profile
- Perspectives
Over 1,600 member companies, 3000+ facilities that process, broker & consume scrap metals, paper, plastics, glass, textiles, electronics and rubber.
ISRI & Electronics Recycling

- Represent ~ 350 companies that process electronics
- Robust, Electronics Division
  - 5 active committees
- Fastest Growing Segment
Survey Project

- **Objective**
  - Obtain current, key data and demographics for the U.S. electronics recycling industry

- **Scope**
  - Electronics Recyclers
  - Scrap Recyclers – that also handle electronics
  - Original Equipment Manufacturers (OEMs)
  - Non-Profit/Not-for-Profit Organizations

- **Sponsor: Recycling Research Foundation**
Methodology

- Conducted by IDC – independent, global market researcher

- Survey participation provided a statistically accurate and comprehensive representation of the market

- Survey data and IDC industry data used to estimate industry metrics
Company Profiles

- Survey Respondents – 182 U.S. organizations
  - 57% Electronics Recyclers
  - 16% Scrap Recyclers
  - 4% OEMs
  - 16% Not-for-Profit Organizations
  - 7% Other
- 50% ISRI Members/50% Non-Members
- All regions of the U.S.
- Large, Medium, and Small companies
Company Inputs

- Company FTEs?
- Company revenues?
- Company volumes?
- Years in the business?
Full Time Employees (FTEs) – 2010

(Electronics Recycling Operations)

% of respondents

- 0-10
- 11-20
- 21-50
- 51-100
- >100
Electronics Recycling Revenue - 2010

% of respondents

0-5M$

6-15M$

16-50M$

>50M$
2010 Input Volume of Electronics Processed

(U.S. short tons)

% of respondents

- < 500T
- 500-5000T
- 5K-10KT
- > 10KT
Years in the Electronics Recycling Business

- 0-5: % of total respondents
- 6-10
- 11-15
- 16-20
- 21-25
- 26+
Industry Inputs

- What is being recycled?
- Where did it come from?
- How much was recycled?
Types of Equipment Recycled

Computer Equipment
Consumer Electronics
Telecom Equipment
Medical
Industrial
Other

% by Weight
Total Volume of Electronics Recycled (U.S.)

M Tons

- 2002
- 2005
- 2010

0
0.5
1
1.5
2
2.5
3
3.5
4
Economic Profile

- Economic impact?
- Industry FTEs?
- Industry outputs?
Outputs of Electronics Recycling in the U.S.

Commodity Grade

Scraper

Repair/Refurbish Equipment & Parts

Direct Sale Working Equipment & Parts

OTHER incl. disposal

by weight %
OEM Perspectives

- Priorities for Selecting a Recycler
  - Downstream due diligence
  - Data & facility security
  - Pricing
  - Third party certification

- Certification Preferences for selecting Recyclers
  - R2/RIOS™ most frequently cited
Third-Party Certification

- Companies with certified facilities ~ 44%
- Most popular certifications:
  - ISO 14001 ~ 65%
  - ISO 9001 ~ 44%
  - R2 ~ 37%  (R2/RIOS ~ 24%)
- Top reasons for pursuing certification:
  - Competitive advantage
  - Customer requirement
  - Operational improvement
Key Challenges

- **For Electronics Recycling Companies**
  - Cost of operations
  - Securing supply of equipment
  - Markets for commodities and products

- **For Electronics Recycling Industry**
  - CRT glass markets
  - Legislation/regulations
  - Consumer electronics

- Volume Processed ~ 3-4M tons
- Gross Revenue ~ US$5 billion
- Employment (FTE) ~ 30,000
- CAGR ~ 20%
Key Findings for U.S. Market

- **Quick growth and more growth**
- **Electronics are recycled in America, not “dumped” overseas**
- **Incentives needed for household electronics**
- **Premium standards, R2/RIOS™, on the rise**
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