

Ensuring Transparency and Sustainability under State Electronics Recycling Law Programs

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E-Scrap Workshop, Orlando, Florida

In attendance:

- Walter Alcorn, Consumer Electronics Association
- Jeff Bednar, PA Department of Environmental Protection, Recycling Program
- Mayling Inthisarn, Novotec Recycling
- Carole Cifrino, Maine Department of Environmental Protection
- Tricia Conroy, MRM - Electronic Manufacturers Recycling Management Co.
- JK Delahay, Brother
- Tod Eckberg, MPCA
- Randy Erman, ecoATM
- Luke Frazier, MPCA
- Matt Gobble, MRM
- Jack Himes, Pennsylvania Recycling Markets, Inc.
- Garth Hickle, MPCA
- Tom Hogye, ECS
- Beth Johnson, Dell
- Karen Knaebel, Vermont Department of Environmental Conservation
- Lisa Kneller, Vintage Tech Recyclers
- Amanda Kohler, Environmental Protection Agency
- Andriana Kontovrakis, Sims Recycling Solutions
- Mark Latham, CT DEEP
- Jason Linnell, National Center for Electronics Recycling
- Melissa Mallory, Dell
- Linda McFarland, IMS Electronics
- Andrew McManus, Metech
- Shawn McKee, NCDENR
- Marcy McGrath, Wisconsin Department of Natural Resources
- Eileen Naples, Environmental Protection Agency
- Steven Noble, Electronic Take back Program, Michigan DEQ
- Wendy Okazaki, Hawaii DOH
- John Dickenson, RLGA Americas
- Wayne Rifer, Green Electronics Council
- Maria Hannegan, Cali Resources
- Karen Pollard, Environmental Protection Agency
- Liz Resek, Environmental Protection Agency
- Lynn Rubinstein, Northeast Recycling Council
- Patrick Santelli, MRM
- Allison Schumacher, Consumer Electronics Association
- Greg Voorhees, MRM
- Iasia Ward, National Center for Electronics Recycling
- Bob Bylone, PRMC
- Karrie Gibson, Vintage Tech
- Todd Gibson, Vintage Tech
- Brendan Wittry, Vintage Tech
- AK Misra, Amazon
- Beverly Drew, Asset Life Cycle, LLC
- Mohammed Obaid, Mor-Gal Plastic Ltd
- Robert Ames, Allied Services
- Gordon Burgoyne, Covanta
- Lucy Carvalho, Loreen Imp. E Exp. LTDA
- Gordon Day, Reclay StewardEdge
- James Deighan, Second Life E-Cycling
- Ignacio Garcia, Amazon Lab126
- Sandy Holtz, eCyclen, LLC
- Jay Illingworth, Electronic Products Recycling Association (EPRA)
- Bilal Khader, Leen Co.
- Carole Mars, The Sustainability Consortium, ASU
- Jade Lee, SSI
- Ken Poon, PPM Recycling LLC
- Roger Portner, Ricoh Americas Corporation
- Jeff Robinson, ITAD Technologies
- Edmund Stevens, Stericycle Environmental Solutions
- Andriana Kontrovakis, Sims
- Scott Pencer, AER Worldwide
- Patricia Whiting, Sims Recycling
- Seth Heine, e-Stewards Marketplace
- David Troust, Great Forest Inc.

- Holly Vinson, CenterPoint Energy
- Samantha Wade, CenterPoint Energy
- Josh Lynch, Pinellas County Government
- Tim Dunn, Best Buy
- Mike Moss, consultant
- Michael Chao, 3R Network

Goals/Objective: To discuss two key challenges to the implementation of state electronics recycling programs, and develop strategies and best practices that address them going forward.

Introductions and Overview

Jason Linnell, NCER and Carole Cifrino, Maine DEP, ERCC Executive Committee Chair

- ERCC Background; Summary of 2013 workshop
- Goals for the workshop

Slides used: <http://www.ecycleclearinghouse.org/DocRepository/ERCC%20Workshop-%20%20Overview%20Escrap%202014.pdf>

Issue 1: Downstream Transparency and Accountability

- Speakers:
 - Kelley Keogh, Greeneye Partners

She often goes to a recycler (certified or not) looking for transparency in downstream due diligence, and asks for Bills of lading for hazardous waste or focus materials, or materials of concern; primarily mercury, CRTs, PCBs, batteries, and circuit boards). She uses a mass balance tracking system to look at what they are doing. Depending on the customer she might do more on this than focusing on environmental health and safety. She adds things up and looks at the paperwork to determine if it is consistent with what they are reporting.

Recently, she has done some work with Connecticut and some manufacturer consortiums, and asked for random documentation covering several months. Where it gets really fuzzy, using batteries, for example, is that there might be five different chemistries. It goes to a first site which sorts and then ships to four more. Then tracking to the next level gets very difficult. That far down, there is no connection to the original recycler and no motivation to participate in an audit. Depending on the size of the recycler and amount being sent, two tiers down, transparency often melts.

In relation to state law programs, is there anything in particular that they should be looking for? It's hard for state programs to hire a consultant. Because we know the industry so well, we really know how stuff moves through a facility and ask some questions that a state inspector might not think to ask. The story from the marketing person can be quite different than the people on the floor. It's not malicious, they've just decided that there's a better way to do something. In years when markets bad, or commodity low value, downstream recyclers will change a lot, because recyclers are always looking for the best value, and they may not remember to let you know. Keep in mind that the person that you speak to at the company may be different than the commodities person.

- Beth Johnson, Dell

In terms of standards, Dell has its own performance standards for environmental partners, which is what we call recyclers. We have very high expectations beyond recycling. Dell developed its own standard out of necessity. In 2006, Dell began its 3rd party audits of their recyclers. At that time, R2 and e-Stewards were just being developed. And, at that time, some states were passing laws requiring manufacturers to take material back. Dell's standard is not so different than the other standards and we're very supportive of the standards. We believe that it helps to raise the bar. But, none of them are perfect. We are always looking for ways to

improve. You can find the standard on the Dell website (<http://i.dell.com/sites/doccontent/corporate/environment/en/documents/electronic-disposition-policy.pdf>).

Before Dell sends the first pound of material to a recycler, we give them list of what has to be met, and then do a 3rd party audit. This standard includes a mass balance requirement. It is also important that the recycler tells them which downstream recyclers it is working with. If there is a change, they have to notify Dell. Dell is very concerned with checks and balances, and accountability. We believe strongly in 3rd party audits. If a problem is found then Dell oversees the corrective action. If something is wrong, we want to work with them if possible. It is a function of the degree of severity of the problem. They go to their partners monthly for unannounced data security audits. We want to catch them doing the right thing. If a recycler doesn't respond to corrective actions, we may end the relationship.

- Marcy McGrath, WI DNR

We look at a facility from the state program perspective. We are checking to see if material is coming from eligible entities (e.g., consumers and in-state). Most of our recyclers are certified, and we take that as something we can count on. We will ask recyclers for Bills of Lading and other documentation from a random month and do a comparison so that they can prove where their materials are going downstream. She is the only one doing the inspections, so she cannot do a full mass balance. The Wisconsin state law allows for cost-sharing for auditing and that is something they will be pursuing moving forward. They are interested in partnering with an auditor to do a full audit. They want to ensure that recyclers are meeting the program requirements, including that financial assurances are in place. We've found that financial assurances can sometimes be based on the maximum inventory at the start of a business, but that this can change and the financial assurances need to be increased as a result. Their collectors are required to report to them as well as the recyclers, and then she does a cross check between those documents. She does inspect the collectors as well. There are more than 400 collectors, so does a sampling every year. During that sampling, she asks how they are getting their materials to the recyclers and compares with their records.

Questions:

Linda McFarland: What are Wisconsin's requirements for financial assurance?

Marcy McGrath: They have to set aside enough money with a 3rd party for a clean-up of the full site. The law doesn't state how they do it. The recycler is responsible for determining the amount and she reviews it to deem if it is adequate. For example, a small facility (garage), might be \$5,000, and a big one \$3.5 million.

Jay Illingworth: Are you looking at products or just shipping?

Marcy McGrath: We start with how the materials are being accepted, walk through the entire facility, and then want to see the data tracking system.

Jason Linnell: Kelly, what types of financial assurance/closure plans are you seeing?

Kelly Keogh: One of things that has happened recently is that both certification programs have requirements for closure plans within the standards. Hopefully, some of the states also have requirements. R2 requires that not only have cost accounting, but also that for closing the facility the recycler should assume all material has zero value, as well as needing funds for cleanup of hazardous materials, and then there is a requirement for 3rd party has access to a closure plan and financial assurances. So, if the recycler walks away, the question is how do you access the plan? When the closure plan and financial assurance documents are created, you don't

necessarily know how much glass there were going to have on site. So, when you are finding glass, it is typically way more than anyone realized was going to be on site.

If a customer wants to compare what's on site to a closure plan, we will do that, but it is challenging. Until recently, couldn't even look at the Bills of Lading. It is hard to go much further, and at some point you lose transparency; especially with CRTs. For example, the recycler might take off the copper, and then send the CRT to someone that breaks and cleans, and then sent to a smelter, etc.

Karen Pollard: In discussion with some of the states, we are hearing that there is disconnect between the standards and the states. The states knew there were closure plans/financial instruments, but they didn't know the details, or how to access that money.

Kelly Keogh: The standards are voluntary, so there is no regulatory enforcement, and don't require that the information be loaded to the state.

Karen Pollard: Couldn't the standards include a requirement that tells the states?

Participant: Are there different ways to track different materials?

Kelly Keogh: Definitely, and it is a function of the volumes of material of a particular type coming in; which is always fluctuating based on demographics, location, consumer products

Karen Pollard: On the closure cost estimate, the cost of the different materials that cost to get rid of change substantially, so when you do an audit and are looking at the financial instrument, how do you determine if it is enough?

Kelly Keogh: We don't audit to R2 or eSteward. We help a client get ready for an audit. The standards themselves do not train the auditors on how to tell if a closure plan is enough, nor how to tell if there are extra buildings or trailers with glass in it. States requiring this would be a more effective way to approach. There aren't any guidelines.

- Greg Vorhees, MRM

MRM uses certification as first step. Being certified is a prerequisite to our consideration whether to use a recycler. In addition, we do a physical 3rd party audit of site, including reviewing records randomly in a facility, so the recycler doesn't know in advance what is going to be reviewed. Doing a 3rd party audit is a very expensive process. We do several every year, rotating every year which ones are inspected. MRM also does some of its own site audits each year. MRM carries additional pollution liability insurance. We require recyclers to send their Bills of Lading for glass to us on a monthly basis or quarterly, depending on their history. This is a very time intensive process. We try to ensure where the materials are going. Certifications have come a long way, especially recently with their updates. The state laws have resulted in a huge influx of glass into industry, and, resulted in lots of new facilities being created. It's challenging to have enough trained auditors doing the certification audits. It would be good to have a definition of what is a collector, what are Tier 1, 2, 3 recyclers, what is a processor, etc. The audits need to be focused on the various tiers.

- Andrew McManus, Metech Recycling

I would love for ERCC to have a centralized database reflecting who the downstream people are, with contact information, so that can just run reports. The database should be searchable and retrievable, only from members. Would love to take the R2, e-Stewards, and CHWMEG reports combined into the database.

DRAFT

- Mark Latham, Connecticut DEEP

He thinks that an ERCC database/clearinghouse would be a great thing; there are only so many downstream recyclers. It's important for the states to set financial assurance/closure plan requirements. He thinks that there is the ability for ERCC to define what the financial assurance document and what the closure plan should require. CT DEEP has specifics in its regulations the states the requirements for insurance and financial assurance.

All of the seven recyclers approved by CT have an obligation to report to the DEEP. Essentially a mass balance has to be reported. If you're an e-Stewards recycler, the mass balance is more easily obtainable than from other recyclers.

The role for a clearinghouse would be to gain downstream transparency. It could help to reduce inefficiencies in the review and approval process. Each recycler shouldn't have to obtain the same information redundantly; instead information could be captured in a database. E.g., closure plans, financial information, basically R2 type requirements. Eliminating duplication of information that is needed.

Jason Linnell: We did a survey of states this year and last year about what downstream information is required:
See slides:

Linda McFarland: Question for Mark. If it is an out-of-state recycler, how do you decide how much is necessary for a closure plan?

Mark Latham: The value of the financial assurance mechanism is predicated on the storage capacity of the site, based on the amount of material collected from CT.

Linda McFarland: So if \$1 million, that's about 1,592 TV's/month. So, that would result in a \$100,000 financial closure plan. How many have that much?

Mark Latham: I don't think that there are any.

Beth Johnson: Dell requires \$10 million in pollution/liability coverage. A challenge we have with the CT program, is that we are required to work with state designated recyclers. So if things come up we are not able to address and the state sometimes is unable to enforce. Becomes very cost-ineffective for us to try and comply.

One of the issues is that Dell will have contracts with a subset of recyclers to handle materials in CT, but there is no requirement that the collectors are using one of Dell's recyclers. So, there is no mechanism for Dell to pay for that recycler. The collectors get very upset, believing that Dell is shirking its responsibility.

Richard Portner: How do the states incorporate the EPEAT requirements?

Wayne Rifer: It's up to the manufacturer, not the state laws.

Jason Linnell: Perhaps we could do more to support a mass balance approach through a clearinghouse. I'm thinking about state laws in particular, what could be done, what could be done to improve transparency.

Mark Latham: Connecticut thinks that an ERCC clearinghouse is a good idea. CT is looking to help reduce the administrative burden on CT DEEP for reviewing and approving recycling partners. We would like to have a list, maybe like an recycling registration for recyclers. This clearinghouse, if available, could contain information about particular recyclers.

Marci McGrath: I like the idea.

Beth Johnson: We might support depending on the deliverables. I'm not sure it would solve the problem, but would be interested in exploring it.

Jason Linnell: Jay, how are you approaching this in Canada?

Jay Illingworth: There is very little due diligence by provincial regulators. The requirements are on the manufacturers. Financial responsibility is required, but we struggle with it. There has been talk about making downstream more visible but the feedback we get from the industry, is that information about the primary and secondary processor is proprietary information.

Andrew – Recently four big recyclers went out of business. Price erosion is becoming more intense. People still want lower costs, but higher standards are required.

Wayne Rifer: Where is the primary force/energy on price erosion coming from?

Andrew McManus: I don't think the states control this. I think it's collectors operating under the radar screen

Greg Vorhees: In some cases, cities/towns go out to bid and there are no requirements from the state that these companies have to meet certain requirements. So, the city/town will go with the lowest bid and have a warehouse of CRTs a year later. They got what they were asking for. Some recyclers go out and collect materials and speculate about getting recyclers to buy it.

Beth Johnson: There are a couple of challenges. In some instances, the state publishes goals for the year and then there is a feeding frenzy. Everyone goes and collects all that they can and then hold the material hostage. If I can't collect enough and then have to go source some pounds, I don't want to have to pay a premium price to buy material from recyclers that I would never have done business with.

Pennsylvania just asked us to send them an update about how much we have collected this year. It gives the state some sense of who's waiting until the last minute to meet their target. It's not just the manufacturer filling out the piece of paper; I could put anything on there. It should be important that recycler also have to report the data; providing some checks and balances.

Issue 2: Ensuring Sustainability and the Future of State Laws

Discussion Topics:

- What changes are being considered under state laws? New models?
- Common themes from state stakeholder discussions
- What program design elements can help ensure sustainability?
- What is working well under current programs? What's not?
- What can we learn from other stewardship programs?

Jason Linnell: Survey results:

We asked the all states with laws if they are considering some types of program changes with their law. 19 responded. Eleven (11) said yes, whether statute, regulatory, guidance.

See summary at:

<http://www.ecycleclearinghouse.org/DocRepository/Results%20summary%20for%202014%20ERCC%20pre-workshop%20survey.pdf>

Slides for workshop: <http://www.ecycleclearinghouse.org/DocRepository/ERCC%20Workshop-%20%20Overview%20Escrap%202014.pdf>

Areas of Agreement

Garth Hickle: Minnesota is one of states that has had a recent stakeholder meeting. We were discussing what types of changes we should be looking at and what can we do jointly. The MN law is about 7.5 years old.

This is really the 1st time ERCC has made a deliberate attempt to determine where states are at from a benchmarking perspective. The responses fit into three buckets: 1) technical: definitions, goals; 2) management – going beyond law itself, CRTs; compliance and enforcement; and 3) allocation of responsibilities. The third one – allocation of responsibilities—is at the heart of what we’re grappling with. Specifically, under consideration is the role of local government. This issue has caused a lot of challenges for the states. And, the question is being raised whether producer responsibility is actually a funding mechanism for local government, or is it a manufacturer lead funding and management strategy.

Among the problem we found and potential changes to the law are:

1. Inadequate collection coverage. We had assumed that the market would respond and meet the needs of citizens in all areas of state, given that there is an incentive for rural collection. This played out to the extent that we expected it would.
2. We need to change the obligation to reflect changes in the marketplace, such as types of devices. Weight-based is outdated.
3. The entire notion of environmentally sound management, both from the collection and processing stand-point, has pointed to the need to invest in ESM, from practitioner stand-point and enforcement perspective.

We really do want to have a focus on reuse. In the current law there is no benefit for a product being reused. We see this as an important emerging opportunity – supporting numerous businesses engaged in reuse and it is at the top of the management hierarchy.

We are hoping to transition to a new program and that these changes will be considered in the 2015 legislative seasons. We’d like to move towards a convenience model, doing away with the weight-based model. Convenience would be based on the number of sites/county. We see some real value in terms of organizing the system around that approach.

We want to move from a system about compliance to one more about intentionality for manufacturers to be designing, implementing, and programs. We’d like manufacturers to be able to pick who they work with – collectors and recyclers.

We expect that processors will need to be R2 or e-Stewards certified, or meet an equivalent standard. And we are looking at additional recycling requirements, e.g., financial assurance in state law.

Some of the Canadian examples are helpful. We've also been very interested in the paint stewardship model that is expanding around U.S. They have been able to demonstrate that stewardship implemented on the state level can be consistent; this benefits of regulated community as well as for those that oversee it. We believe that consistency state to state is very important.

The battery industry is also looking at model state legislation and working with a handful of states and moving forward consistent legislation. There are some interesting opportunities for synergies between ewaste and battery programs.

Beth Johnson: Was there feedback from citizens that the collection opportunities are not adequate? Or is this an assessment of the state?

Garth Hickle: We have not done a consumer survey. In the hierarchy of tasks we couldn't invest in it at the moment. We hear from local governments that they are receiving calls from consumers. We do have some very strong retail collection activities in the state. Challenges with convenience are relegated to just a few counties; it is not a statewide issue.

Mark Latham: In your shift from goal-based to a convenience-based system, what type of authority does MN have to enforce? What would be the measures and targets, and how do you enforce?

Garth Hickle: The conceptual plan is that there would be a defined number of sites around the state, based on county population. And, if there is one stewardship organization it would have to meet this number. If there are multiple stewardship organizations, which is more likely, then we would allocate convenience based on market share. So that the manufacturers participating in a plan would indicate overall market share.

Carole Cifrino: Who would be responsible for the materials collected at those sites?

Garth Hickle: We are not going to require that each site collect everything. For example, HP had asked whether it would have to take TVs under this scenario. We're not going to require that, but we're going to have to ensure that there is a collection opportunity for each type of device in each county, but not necessarily at each site.

Carole Cifrino: How do you allocate for the impact of transportation costs?

Garth Hickle: We are looking into breaking state into zones, so then the convenience will be allocated equitably between zones.

Walter Alcorn: Manufacturers have a long term vision that they want recycling to be as convenient as purchasing. But the truth is that it is easier to put it into the trash than to buy. We're dealing with the area between making it as easy to purchase and disposal. There are more disposal locations around the country than retail locations.

Beth Johnson: What are you considering for reuse?

Garth Hickle: It wouldn't be a hard target. And it wouldn't be a hard target for recycling either. We're concerned about kill switch legislation, as well as some other laws that are barriers to second hand stores. It's more recognizing it in a way that is not there now as well as trying to address some of the barriers.

Carole Cifrino: On the allocation of responsibilities, in particular, are we just trying to have manufacturers pay for local collection, or are we expecting more of them?

Garth Hickle: The question is what do we see as the responsibility of state government? I advocate for a model where government is in an oversight role (compliance and enforcement). Directly inserting state government into the marketplace is not appropriate. For example, CT selects recyclers, establishes pricing, etc. This is not something that MN would contemplate.

Mark Latham: Connecticut is also looking at changing to convenience goals, although we do think that our program is convenient. Each town in the state has a collection program. Infrastructure was already in place. And, we do think our program is sustainable and working.

Carole Cifrino: Like CT, Maine's collection sites are municipal and we approve the consolidators and how much they can charge. What works well about that is convenience of collection. Our collection numbers go up every year. And when you add the manufacturer and retail efforts; I believe virtually nothing is going to disposal.

However, I don't like being in the business of approving the rate. If we can have an industry-led system that's based on responsibilities for all types of products, proportional to sales, with standards in there, and if industry is willing to do that, she would be willing to go to the legislature with them.

Walter Alcorn: Ensuring the stability of state laws requires getting manufacturers to buy-in into system. I don't think any system is sustainable without the people that are paying for it being supportive. We have a lot of these laws because one manufacturer supported the law in that state. We're at a point now with the consumer electronics industry that we are at the table and organized in a way that we weren't when the original laws were passed.

Beth Johnson: As I hear the consideration of convenience being something to move towards, we have to keep in mind that there are manufacturers and retailers that already pay for ongoing collection. What is being proposed would not necessarily level the playing field.

We are hearing from the manufacturer community about the pros and cons as states are considering making these changes. Not all products are alike, and some are more expensive to recycle and some have more value.

Roger Portner: I'm worried about orphan products. A small handful of companies are paying from everything that's no longer in market.

Walter Alcorn: CEA supported the recent South Carolina model. It explores how collection convenience can be used as a compliance metric. It is not silver bullet, however. The economics of the industry and understanding it is very important. If you look at the sales of computers and TVs, they are both down. That part of the consumer electronics industry is in a little bit of a decline. Yet, the recycling burden going up. It's a struggle there. And, there are now CFO's that are paying attention. All of a sudden they are at the table and helping to drive the company's activities.

Andrew McManus: It would be ideal to have states move towards a common framework.

Jason Linnell: That is not currently a possibility. Recyclers as well as manufacturers have more experience and might have different feelings on the topic.

Walter Alcorn: I still have federal framework dream, and haven't totally given up on it.

Participant: What about Europe? What are they doing?

Jason Linnell: They do have a common framework. But it is still is a little bit messy, but less messy than here.

Jason asked Jay, why aren't you seeing the same issues as we are?

Jay Illingworth: Harmonization is really an industry thing. The regulators have no incentive to harmonize. I think that we have a model that most retailers and manufacturers are happy with. Reuse is a challenge for us. There is a push for new products to be included in the programs; anything that plugs in or with a battery. This will be very challenging. There is currently a visible fee model in most provinces, but we are under a lot of pressure at the moment to look at a market share system in the future. We have been having a lot of conversation about targets and looking at trends in the industry. Miniaturization, and product consolidation has implied that weight based isn't going to be a viable metric moving forward. We need to be making the public aware of convenient locations. And, there is a lot of emphasis on cross-program consolidation; wanting to see all materials being collected at one venue.

Jade Lee – I echo Walter's perspective. Producer responsibility doesn't work well for both manufacturers and recyclers. We should discuss what the recyclers in California went through. The product margin is shrinking, and manufacturers are looking for cheaper strategies for meeting goals, which is harder on recyclers. As a result, many good recyclers don't want to be in the residential segment of market. Some good companies are closing their facilities. In IL, we recently received several phone calls from different counties that had offers for free recycling. It is time for us to brainstorm about how to move forward. I do not think that producer responsibility programs are the answer.

Tom Hogye: An OEM/Producer, may not even make a TV or a display device, yet some of them have taken on a great deal of responsibility in recycling these very kinds of devices as a large part of their recycling stewardship even though they don't make such a device.

Walter Alcorn: We are seeing stress on local recyclers in a number of states. I don't think it's a conspiracy on the manufacturers' part. In manufacturer programs, they tend to hire only a handful of recyclers, and they don't tend to go in and hire local recyclers. The impact has been that local recyclers that work for local governments and collection programs don't have a connection back to the manufacturers.

Wrap-Up: Areas of Agreement/Potential ERCC Actions

1. Pursue possibility of clearinghouse and components it could include.
2. Develop a summary of state closure and financial assurance requirements, and model language for each.
3. Convene these discussions about different models and potential changes in law – e.g., South Carolina, Minnesota, etc. and how programs might be integrated into other EPR programs.