

# March 15, 2017

## Stakeholder Meeting Notes

**MEETING FACILITATOR:** Shirley Willd-Wagner / Howard Levenson / Jeff Hunts

### Stakeholder Workshop – Future of Electronic Waste Management in California – Part 2

Workshop Documents and Attachments can be found:

<http://www.calrecycle.ca.gov/Actions/PublicNoticeDetail.aspx?id=1953&aiid=1783>

#### **Attendance:**

##### Stakeholders

Kristin Sherrill, CEAR, Inc.

Jane Bei, CEAR, Inc.

Jack Rockwood, ECS

Ken Taggart, ECS

Russ Caswell, e-Recycling of CA

James Ignacio, Tycoon Materials

Jaime Minor, NPA for HP Inc.

Emily Pappas, NPA for HP Inc.

Derrick Thomas, SHJRA

Teresa Bui, Californians Against Waste

Kelly Seacrest, Sacramento County

Sharon Simpson – Waste Management

Theresa, DTSC

Curt Spivey, ECS via phone

Roy Dann, CalMicro via phone

Ed Segal, IMS via phone

Jason Linnell, ERCC

##### CalRecycle Speakers

Jeff Hunts

Howard Levenson

Shirley Willd-Wagner

## Agenda

### **BACKGROUND AND OVERVIEW:**

The purpose of this workshop is to engage stakeholders in an initial discussion concerning the future of electronic waste collection and management in California.

California's existing electronic waste management program has been highly successful in collecting and properly handling covered electronic waste generated in the state. The current program has fostered a robust collection and recycling network while significantly relieving local jurisdictions and businesses of the cost burden of managing these waste and providing convenient collection opportunities for all generators.

However, increasingly complex technologies are being discarded, often with less intrinsic material value, which are difficult to dismantle and handle. As well global economics disrupt commodity markets and necessary environmental regulations present challenges to industry compliance.

The format today includes three background documents to frame discussion. Printers were selected for this scenario because they are frequently mentioned when discussing expansion of the covered electronic waste definition. The two scenarios described in the attached documents are: 1) expanding the definition of covered electronic devices; and 2) developing a product stewardship program separate from the existing CEW program to collect and manage printers. The third attachment has questions to address if CalRecycle wishes to consider a product stewardship model for all e-waste.

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### **ENHANCE EXISTING PROGRAM CONCEPT:**

#### WELCOME (See slides 1-3):

Howard discussed what had been achieved and what we are examining now. He also mentioned the need for more information regarding non-crts and other items costs that are not asked on the Net Cost Reports.

- Purpose of Project: Get stakeholder input on possible approaches to the challenges facing e-waste.
- Pursuing Two Parallel Tracks: Continue to separately consider enhancements to the existing CEW program that don't require statutory change but which would require regulatory changes. Not today's focus.
- Today's Focus: Changes that would require statutory change: Maintain current system but add specific devices in. New product stewardship management model for specific devices. Questions about broader stewardship approach.
- Goal for Today: This is not a policy proposal. We want to make sure we identify the problem, and ask the rights questions about tools and models.

#### INTRODUCTION (see slides 4-5):

Shirley provided a project status update; what's been happening since the September 2016 workshop. Briefly described research she obtained through interviews with program managers from other states, Canada, Europe. Strengths and weaknesses in their programs; ideas for the future of e-waste management.

#### CURRENT INITIATIVES (see slides 6-7):

Jeff discussed the status of two current regulatory efforts: 1) new rules governing the designated approved collector provision and 2) finalizing existing emergency regulation packages that address residuals management and administrative penalties. The changes would also fix some nagging issues and remove the requirement to track the serial number when claiming payment for collecting/recycling non-CRTs. Jeff requested that recyclers submit cost data for managing non-CRT CEWs. Solid data is needed before CalRecycle can even begin to consider changes for the future.

### **EXPANDING EXISTING PROGRAM; PRINTER SCENARIO (see slides 8-9):**

#### **(Attachment 1)**

Jeff discussed the actions that CalRecycle staff thinks would be needed to add a particular product category as a CED. What would it look like to add more devices? He specifically reviewed the concepts described in Attachment 1. New legislation and regulatory changes would be required. DTSC might need to add the devices to their list. Many specific questions would need to be addressed: what is the rationale for adding printers; what types of printers should be included; how should the consumer fee and recovery/recycling payment rates be established; how should printer manufacturers participate (current requirement for annual report); by adding printers to the CEW system, would we be taking away re-use options; what material management standards should be in place to insure proper handling of printers; what processing documents should be required; where do denied residuals go.

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Howard noted that we need to answer all of these questions before a proposal is made. So, we are asking for your suggestions today. Are we asking the right questions? What data would we need if we wish to move forward? The printer scenario is just an example.

### STAKEHOLDER INPUT

**Sharon** - I understand printers are just an example but in the long term how do you define what really needs to be in this program. Printers should be done now, but what other items can we add in the future? How do we define which ones would be covered?

**Shirley** – Clear criteria should be developed to determine which devices should be included in the definition of CEW. Other states are struggling with these questions as well. Many states have added printers, but no one has extended their e-waste management system to include everything with a circuit board or cord. Do you have any ideas?

**Sharon** – Product Stewardship would be a more flexible model, and may be a better idea. Tracking would be a lot different. Based on what the recycler actually receives and takes apart.

**Jeff** – Any approach will need definition. What would be an eligible device or source? Should be based on real world conditions, market value, and flow volumes. Needs to be defined for legislation. Because of the specialized nature of printers, identifying eligible manufacturers and models would not be overly difficult.

If the industry (manufacturers and recyclers) or other stakeholders identify a need, we could add printers or other electronic devices. This is an exploration what it might take so we can be prepared if legislation is introduced.

**Howard** – Stewardship is hard to define. Clear definitions are critical and we would need your input. Other stewardship programs (carpet, paint) struggled with definitions. To establish fee and payment rates, we need a very clear standard of what is covered and the true costs to appropriately manage the material.

**Jane** – Gradually add all electronics into the payment system. Agrees with Sharon that they are hard to define. Suggests including copiers because they are difficult to dismantle due to weight and hazardous components. We do not want to add another waste stream that requires tracking make, model and serial number. We should determine the rate via the Net Cost Reports that are submitted and possibly include costs for all e-waste.

**Shirley** – This is exactly the kind of information we need; copiers are heavy and hard to manage. What are the markets; do printers and copiers have value? What would constitute cancellation?

**Russ** – In today's world, we don't see any value. If you only look at the cost every other year, it doesn't show us the current value. But we have to live with the payment rate established by uncertain figures for at least two years. Value for scrap metals changes weekly and we cannot predict how the world

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economy will change over a two-year period. Hard to figure out how we will accept material. Need flexible and responsive payment rate adjustment.

**Teresa Bui** - Thanks for this program and being pro-active. We need to add items to the program. Everything with a plug. If that is not possible, we would want to be similar to other states like Minnesota where CPUs are included, circuit boards and printers. Something similar to the most comprehensive and stringent e-waste programs in the US. Need to provide CalRecycle the flexibility to adjust payment rates as necessary. Base payment rates on scrap value market data (published regularly) instead of solely on Net Cost Reports.

**Sharon** – Add flexibility. Being more inclusive of the entire e-waste stream would benefit everyone in terms of time management. Not sure how we would track, we receive large boxes to sort through. Can't sort every little item. Is it an appliance, is it metal, is it e-waste? Yes, we should add all e-waste Maybe we define as everything that is programmable or has a circuit board or a cord. Sharon has some cost data.

**Howard** – Have you provided that cost information with us? Can you provide it to us?

**Sharon** – Yes, we have some information regarding costs to the recycler and could provide it if it will help to move this project forward. E-Waste costs could be added the existing Form 303 reporting requirements and the voluntary survey. I also agree with Russ regarding the constantly changing market.

**Jack** – Volatile markets make it hard to manage. It goes up and down. Having fixed payment makes it hard to manage the business. If market improves a fixed rate is a benefit, but when it goes down a fixed rate makes it hard.

**Ken** – Getting data. CalRecycle needs to formally request cost information from recyclers on a voluntary basis. ECS just had an audit from DTSC and Matt McCarron said that eight recyclers are doing about 80% of the business. That should provide sufficient data for a good analysis.

Also, there are many types of printers (little printers, plotter printers, gas pumps, ATM machines, etc.). We could specify printers with sheet paper or paper trays in them. ATMs or gas pumps should not be included. Defining the scope is be doable. For cancellation of printers, you could ask for the removal/destruction of the circuit boards and the removal/disruption of light sources.

**Jeff** – Thank you Ken. That's the kind of input we are looking for. It would be nice to take all e-waste. The challenge is in scoping down exactly what those devices are; not so much on the recovery side, but who pays for it, where does the money come from? If we take all e-waste we need to be specific about the definitions so we can establish fees for each item at the point of sale. It seems straightforward until you get to the exemptions. How to work through the complexities of adding anything to this existing model.

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**Roy Dann** – Are printers serving only as an example of where the future direction of the electronics waste management going to go? And we will gradually implement putting more into the system. Or is this just a first try?

**Jeff** – It's an example at this point. We wanted to focus on one tangible scenario that everyone is familiar with. We are not going to add printers right now. That's not CalRecycle's role. We want to be prepared if and when it a proposal is introduced to add printers or any other electronic device. The complexities we are discussing today apply to any product category. Keep engaged. Tell us about your challenges. Like the challenge of scrap cost: statute provides for an *average* net cost for the industry (high for some, low for others). What do you do when your costs aren't covered? We need to better understand the future if this is feasible. Is our current model going to continue working?

**Roy** – Recyclers are concerned if regulations can happen on time if other waste streams are added. Printers have been an issue for a long time. This is a great opportunity to look at the big picture; take all e-waste out of the waste stream. Give CalRecycle the status or the rights to be able to go past the emergency regulations. All types of new technologies are coming; autonomous cars, robotics etc. What are we going to do about them? What rules and regulations can help recyclers properly manage the material and be compensated for these products? Use legislation to give CalRecycle or the Stewardship organization more authority?

**Jeff** – Why do we have SB 20/50 in the first place? Primarily to relieve local governments of the cost burden of managing discarded e-waste. Recycling programs did exist before SB 20, but at a significant cost to government and consumers. Whose costs are we trying to relieve? Many states only cover wastes generated by residential, sometimes schools, and small businesses. In CA, because all e-waste is considered hazardous regardless of generator source, we include all material that is used in the state. Everyone pays and everyone plays.

**Russ** – We need more education to consumers. Average consumers don't understand what e-waste is. What is an appliance or e-waste? Could increase outreach at the point of purchase.

**Jeff** – It's a huge challenge and as technology progresses, we will be dealing with this more and more.

**Emily** – If we consider adding printers (or any other product) beyond hypothetically, CalRecycle should look into what manufactures are currently doing on a voluntary basis. HP has voluntary take-back programs that work well. If a returned product has value, they pay the consumer that value. Examine current efforts before introducing mandatory programs.

**Sharon** – Waste Management does largely curbside residential. Over half the material received is not CED, but miscellaneous e-waste, which is a cost burden. Also all electronics are being pulled out of the material recovery line. Need more education; most people think that if they just throw their waste in the bin it will eventually be recycled. This results in a financial burden. 60-70% of this miscellaneous waste is smashed and destroyed in the trash truck; it's either hard to retrieve or not retrievable at all. Need more education to consumers and small businesses (many don't even know what DTSC is and that they are required to get an EPA ID number).

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**Jeff** – How much of what you handle comes in through coordinated collection; drop off, events, arrangements made with LG vs load check? How much is CEW vs misc.?

We agree with the need for more education. We are currently taking on a public information campaign.

**Sharon** – I do not track the miscellaneous e-waste that comes out of the MRF directly. Out of approximately 290 flat screens, we could only claim less than 100 for payment because the serial number was destroyed in the process.

**Jeff** – That's one reason we eliminated the requirement for tracking the serial number in our current regulatory package.

**Derrick** – Echoes remarks by HP to consider voluntary initiatives by manufacturer. How does CalRecycle envision manufacturer responsibility no how we move forward?

**Howard** – We will be discussing possible roles for manufacturers in the next presentation.

**Jeff** – To repeat, we are not proposing anything. We are not driving an initiative towards any particular outcome. We are scoping out what needs to be considered and preparing for the possibilities as the world of e-waste management evolves. We want information from all stakeholders.

### **PRODUCT STEWARDSHIP MODEL CONCEPT FOR NEW DEVICES (see slides 10-11)** **([Attachment 2](#))**

Shirley discussed the Product Stewardship (PS) model and what it might look like. What things do we need to consider? Mentioned Cynthia Dunn's overview of Extended Producer Responsibility from the September workshop. Detailed information on EPR and Product Stewardship concepts can be found on CalRecycle's [website](#).

Shirley reviewed the program elements that would need to be included in a product stewardship model for printers: definitions, scope, legislation, primary roles and responsibilities, collection and convenience goals, financing mechanism, enforcement, materials management standards, transparency and accountability, education and outreach, and product design.

**Howard** – Reiterated that this is not a legislative proposal. At the fall workshop there was interest in adding more devices to the CEW system but not as much interest in a PS approach. This workshop outlines what would be needed for a comprehensive PS model for printers based on what we know from the paint, carpet and mattresses programs. How would it work if we kept the existing CEW program and developed a separate program for this particular product run by a manufacturing group under legislative authority?

The next session this afternoon will explore some questions concerning a full PS system for all e-wastes. Whether a PS model is developed for one device or for everything, we need to evaluate concepts that would make it successful. How could we make this work with the currently run the CEW payment system? Would we mesh them together or keep them separate?

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### STAKEHOLDER INPUT

**Sharon** – Product Stewardship is a good idea. Provides more flexibility to focus goals on specific needs of the state (e.g. rural areas). Current CEW system does not account for the differences in transportation costs. For example, a load from Modoc County to a recycler is triple the cost in Sacramento with no additional cost recovery. Establishing population-based goals could address challenges with rural collection. PS should encompass all e-waste; a hybrid model is not feasible. Sorting the material to go into different systems is a logistical nightmare. All CEDs should be covered in new program.

**Theresa Bui** – CAW sponsored the paint and mattress bills so understands the concepts. Sees the need for clear statutory language with specified collection rates and dates. Need to make sure the manufactures have incentive to perform the best they can. Manufactures try to keep the costs as low as possible. If we are to incorporate the PS approach, we need to make sure the recyclers are made whole (maybe through a NCR as currently done) so manufactures don't try to drive the costs as low as possible leaving the recyclers on the hook for additional costs.

Product design and encouraging reuse are weakest parts of PS systems. How do we encourage reuse? In the Beverage Container program, an association of plastic recyclers developed recycling guidelines that are compatible with recycling systems; could provide some ideas for electronics. We could use expertise from ISRI, R2, e-Stewards and other stakeholders to create a best practices design guideline. But CAW encourages you not to require any specific certification since we don't know what how any particular certification may evolve in the future. Valuable tool is that payment is made only when material is cancelled in the state; we should keep this requirement. Prevents whole devices being shipped overseas with lack of controls for environmental protection and worker safety. Encouraging manufacturing using HHW/MRF infrastructure.

**Ken** – PS not my first choice. PS issues in other states where manufacturers are not involved in program implementation. They join an association and the association represents them, sets the goals. Associations do a great at driving the price down, but not to the recyclers benefit. In some cases, CRT glass has piled up. Better model: state determines the OEM sales and volumes. OEMs pay the state, state gives to recyclers performing on behalf of those OEMs. This would take care of collection in rural area. Yearly quotas will not be an issue, where OEMs end the program when targets are met.

**Howard** – So that is a different concept, which is great. How would you see this working; after collecting the fee from manufactures, the state distributes payments to recyclers or perhaps awards grants to local governments to cover costs of HHW collection centers; or some combination or variation of those?

**Ken** – Pay to recyclers that are performing on the OEMs behalf. Switching from consumer fees to manufactures paying state, state paying recyclers. Recyclers approved in the system. Could be in different categories; e.g. scrap metal recyclers might be in the program for microwaves; printers and copiers would have more traditional type of recyclers.

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**Howard** - Currently we have a consumer fee. This would be similar to the manufacturer assessment on lubricating oil. Manufacturers pay a certain amount to the state. The funds do not go directly to recyclers but support specific used oil recycling purposes.

**Ken**- Doesn't that money go to grants, education, and cleanup, etc.? Hadn't thought about the grant concept. I was thinking it could be incorporated into the existing program, with a different funding source. OEM would pay the fee and CalRecycle would do everything else the same as the current CEW program. Keep the annual inspections by DTSC to make sure the recyclers are doing a good job with the least impact on the environment. E-stewards and R2 are good but may be less necessary since we have the DTSC here.

**Howard** - So expanding the current system but changing the funding source.

**Ken** – Yes.

**Jeff** – ECS operates in other states with stewardship programs. When thinking about other state programs, what falls short that would need to be remedied in CA if CA were to take a different approach? Are there limitations on how much material you pick up or how much is offered for sale to you?

**Ken** – Yes, Oregon and Washington have specific product categories that are a part of program but certain associations can say that a product is acceptable or not acceptable to them. Collector is now providing you variety of material but you can only take a certain product. May have a computer OEM that won't take TVs. That is a problem. Could be solved if the state got the money from the OEM associations. I work with a Goodwill in another state; I have to run their product through two different programs to source all of the material from one location.

**Jeff** – What do you see are the major drivers that prevent recyclers from being “whole” elsewhere? If we did go to another model what would need to be addressed? You met your volumes for the year and no more material is coming in, does that affect your financials? What is your biggest competitive disadvantage operating elsewhere vs here; the number of recyclers that can meet the offering price? Given, of course that you are operating in California with a different regulatory burden.

**Ken** – Providing rural collection for an association is challenging; hard to cover all of the collection points in the state. CA flaw is when the program was initiated we banned all CRTs from landfills. The cities and counties said they were going to go bankrupt and needed a funding source. HHW was a major drain on their budgets and suddenly they have to pay for CRT management costs – thus SB 20 was created. The cities, counties, Goodwills and Salvation Armys should have been thrilled that someone was going to take this stuff away for free. Here collectors are paid a good price for that collection activity. In other states, they are not paid as much so there is a lower collection cost and not all the paper work that is required in CA. If you added other product categories to the program it would be better to not require names and addresses. That is a better solution.

**Sharon** – With the PS approach, there is a cost to the collector. The primary cost burden is on the jurisdiction and collectors. The paint and carpet programs aren't flourishing because the system does



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not help with the *collection* costs. There isn't a mechanism to support the labor involved with the collection. PS approach would need to make sure that fair labor costs are included. E-Waste is a different beast. Typically, I buy paint or carpet in a store; you go inside a physical location to make the purchase. Many electronics sales are online. Public education must be required online and in stores.

**Howard** – In the paint program, there were early contractual negotiations about coverage; what would be paid to collectors, private entities, and local government. Issues were not fully delineated in statute and did become an issue. Whether we are speaking of product stewardship or expansion of the current system, getting the language right is critical and must be carefully thought out – it could be a cost compensation or definitional issue. Can put ourselves in a situation where we are not able to take an enforcement action against an entity that is not performing.

**Sharon** – In the PaintCare program some of those things work but some don't. My labor for separating for reuse is compensated to collectors. But putting paint in a box for fuel or incineration is not covered. Let's really look at those products and see what can go back to the public as reuse. We need to look at the whole picture not just the pieces and maybe we can incentive reuse.

**Derrick** – (Addressing Ken's comments about manufacturers paying the state.) Shifting the regulatory burdens and fees to manufactures is not the solution. It makes more sense to understand and address the underlying cost drivers.

**Ken** – Prefers California program but if we go to a stewardship-based program let the state manage the money rather than having the OEMs (through their association) deal directly with the recyclers.

**Derrick** – We like the current program. It makes more sense to determine the underlying costs than shift the burden.

**Shirley** – Can you discuss what you mean by underlying costs drivers?

**Derrick** – The paper work and reporting requirements (specifically administrative-type costs) may be driving up the costs for recyclers and collectors. Maybe we could address that issue to lower the costs.

**Shirley** – Ok so you weren't talking about the underlying cost factors of the material itself, the degree of hazardous material, or toxic materials or management of those. You were talking more about the administrative type costs of managing the program.

**Ken** – I believe my suggestion to have the state manage the money would reduce costs because when an association has to provide coverage in all of the rural areas it drives up costs. So pushing the money to the state and using the current recycler network would drive a less expensive proposition instead of associations contracting directly with the recyclers.

**Curt** – (Addressing Jeff's question on producer responsibility legislation vs SB 20.) Producer responsibility legislation puts an enormous amount of pressure on e-recycler program because it is the ultimate goal for an OEM to push their costs down. The essential purpose of SB 20 is sustainability, and dealing in both of the programs, I think SB 20 is superior in the way CalRecycle manages the

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program. SB20 allows sustainability by reviewing the ups and downs of commodity markets. Many PS states have legacy piles of material that have accumulated.

**Jason Linnell** – (Addressing the alternative discussed earlier of having a manufacturer fee paid directly to the state then the state distributing the funding to recyclers.) This would be the same concept as the current SB 20 system. No other state model does it this way. Manufactures in other states pay their assigned share (or obligation) and then they contract with the association. Manufactures might have problems with the fee going to the state because they will not have control of the fee assessed. In Oregon the manufacturers do pay a fee to the state based on their share; the state then contracts with an administrative organization who in turn contracts with the collectors and recyclers to implement the program.

**Howard** – These are some of the lessons we have learned from our existing EPR programs in terms of cost structures, what is required of the stewardship organizations, how they meet the goals and what happens if they do not meet the goals. It's part of how those laws are structured and you have to address those issues.

### ISSUES AND QUESTIONS (slide 12)

[\(Attachment 3\)](#)

**Howard** – If we went to a full PS model what would we do; how could we implement a transition? We have already touched on several of these topics, but can discuss further now.

**Shirley** – This is your opportunity for additional input on PS model for all e-waste. Reviewed the questions and issues described in Attachment 3. What specific key elements would make PS successful for e-waste management? How to find the right combination of cost efficiency and making sure that recyclers and collectors are made whole (not left holding the bag when performance targets have been met)? Should any fees flow through the state or through OEMs? Should both collection and convenience goals be implemented? What about the concept of “modulated fees”; e.g., credits for rural collection or design for ease of dismantling; or additional fees for higher levels of toxic materials in products?

**Russ** – Manufactures need to share what is in the products, specifically if hazardous materials are present or not. Recyclers must follow different dismantling protocols if hazardous materials are present. Costs would be reduced if recycler could scan a product and see what type of hazardous materials they will be handling.

**Theresa Bui** – Massachusetts Right to Repair law that requires manufacturers provide to consumers and recyclers what is in the product so it is easier to repair and reuse. Maybe we could follow something like that.

**Jason L.** – Need both collection targets and convenience goals, number of sites per population. What are the appropriate levels of convenience? We have some examples for reference; requirements of a certain number of collection sites based on population or geographic area. Look at how the system is organized. If manufacturer based system, is each manufacturer free to set up own program and look at performance for the state as a whole; or do they set up stewardship groups to meet program goals;

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or have one default group and allow individual manufacturers to opt by developing their own program like Oregon, Washington, Rhode Island, Vermont? Should goals be for particular products or groups of products? Answer some of these questions then decisions can follow.

**Derrick** – (In regards to Russ’s comment about materials in a product.) Manufacturer blueprints considered intellectual property. Sharing this information would be a concern.

**Ken** – It would be helpful to know if hazardous materials are in the products. We can’t shred items that have batteries or fluorescent lights. We do not want the blueprint, just need to know what is contained inside.

**Howard** – Derrick is that feasible?

**Derrick** – I think that is a valid concern that should be looked into.

**Russ** – I disagree on intellectual property. It’s not a secret, we don’t want a blueprint. Consumers have the right to know if they are buying something hazardous.

### **NEXT STEPS (slide 13)**

**Howard** – We have a lot to talk about, this was a good exploration of ideas. CalRecycle does not have a predetermined direction for this project. We’ll take this input, mull it over and determine our next steps. We will also continue to take input if you want to contact any of us. What do you think we should do next?

**Sharon** – Would like to look at e-waste as a whole. Minimizing paperwork. Either approach could work (enhancing existing CEW program or product stewardship model). Address the stockpile issue with inspection mechanisms. Paperwork burdensome.

**Howard** – How would you define e-waste as a whole?

**Sharon** – E-Waste specifics = anything with a circuit board.

**Roy** – Agree with Sharon, include all e-waste.

**Howard** – Is it worth having a discussion concerning the range or types of products we could include in e-waste without picking a model? Maybe determining what attributes or criteria should be considered when deciding which products to add to the definition of CED? Which ones are higher priorities? So that everyone has a common understanding of the need to manage a material type without picking a particular model.

**Sharon** – DTSC should be defining all of the e-waste. They put it on the generator. A more comprehensive definition of what makes an electronic waste hazardous would be helpful. For example I have asked about microwaves and they could be either an appliance or e-waste. Anything over 50 pounds is an appliance, under 50 pounds is an e-waste. Three different definitions. If we are regulating it as hazardous waste, let’s cover it all in the e-waste program and not piece meal it out.

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**Kelly** – Local government (Sacramento County) perspective. In our contract with our recycler, we categorize e-waste in three umbrella categories for the purposes of determining payment rates: Covered Electronic Waste, (CEW), Universal Waste Electronic Devices (UWED), and REEM (Recyclable Electric Equipment Materials; small household appliances, power tools, electronic equipment, etc.). Within CEW category, we have CRTs and Non-CRT. In the UWED category, we have Premium, and General. Each category and sub-category has a price point monthly based on the market index value. Currently, Premium UWEDs provide revenue to the County while General UWEDs are a cost to the County. It all goes through our HHW collection, and landfill receiving and recovery station.

**Howard** – Is any of that cost information available? That would be very useful.

**Kelly** – Yes.

**Derrick** – Suggests keeping the status quo, the current program is working. Cost drivers can and should be addressed along with other regulatory burdens with the goal of making recyclers and others whole. Voluntary programs have been undertaken by manufacturers and CalRecycle should continue to work with manufactures to expand on those successful efforts. Any requirements regarding intellectual property should be avoided.

**Teresa Bui** – Identify the current sales information for each potential device we would include. Use resources from Form 303 and waste characterization studies to find the current disposal rate and how much of the material is being diverted and recycled right now.

**Shirley** – (to Jason Linnell) – does ERCC have input on market and sales data?

**Jason** (ERCC) – We have some sales information for other states with manufacturer market share requirements in their laws. We do not have market data for the broad range we are discussing here (everything with a plug) but for the typical covered electronics in other states. We have some broad numbers of total units or weights sold in the country that we can breakdown for California. A few years ago, we worked with Jeff to gather data from universal waste collectors to develop an estimate for the amount of non-crt material coming in (pounds) to the state.

**Jeff** – if ERCC wants to, we would be happy to work with you on that.

**Howard** – Sales data is hard to get. Will figure out approaches to retrieve data.

**Jason** – National data is what we use and we can back out the CA component.

**Howard** – Thank you everyone, both here and on the phone, for your participation. This was valuable information. Continue to provide any comments to us as we move forward.

You can find the background documents and presentations from this or the previous workshop on the e-waste [futures website](#).