

The Future of Electronic Waste Management in California

Panel Discussion
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**ONSITE ELECTRONICS
RECYCLING**

September 14, 2016

Topics Covered

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- Onsite's experience with California's Current E-waste approach
- Onsite's involvement with the CEW Program
- Onsite's experience in other States
- Challenges to California as waste streams change. How can California best address this

CEW Experience

- 1) Personally participated in electronics recycling in California since approximately 2000
- 2) Worked with local jurisdictions through HHW programs, recycling e-waste who pushed for SB20, and financial relief
- 3) Participated in CEW system since inception (1/1/05)
- 4) Recycled non-CEW in California since Program inception (1/1/05)



CEW Participation

As a general rule, our participation in the CEW system has been positive and we view it as a more sustainable model than that of other States.

Pros

- Covers the true cost of collection & recycling
- Payments adjusted on a regular basis
- Payment adjusted based on average net costs
- Encourages responsible, in-State recycling of CEW
- Covers costly CRT devices
- Creates free market system, customers choose which recyclers to work with

Pros

- No competing for OEM contracts, prices not dictated by OEM's
- Requires accountability for downstream management (report and show where residuals go)
- Requires adherence to strict DTSC Regulations

Cons

- Payment adjustments not quick enough to react to changing market conditions
- Only covers display devices, has led to increased collection of other electronics, and likely increased improper management
- Doesn't pay appropriately for Non-CRT CEW. Make, model, serial number requirement cumbersome, not always possible to collect. Lower weight, more disassembly time

Cons

- Encourages handler involvement, with little risk
- Requires Recyclers to be “collection log cops”. Extremely time consuming/expensive
- Collection logs
- Payments can be stopped/clogged when market issues arise
- DTSC Regulations
 - Slow to react to Glass issues

Other State Experience

- Opened a Colorado facility, handling material from Colorado, Wyoming and Nebraska in 2012
 - Colorado has a landfill ban only, no program
 - Wyoming and Nebraska have no ban, no program
 - Customers pay for recycling.

Other State Experience

- Charge residential/small business customers directly for e-waste
 - CRT Televisions/Monitors: \$15.00 - 35.00
 - Flat Screen Televisions/Monitors: \$10.00 - 30.00
 - Printers/Copiers: \$10.00
 - Other items: \$2.00 - \$25.00

While most residents pay willingly, some grumble, some threaten to dump it on the side of the road. **HOWEVER**, they understand the cost of recycling.



Other State Experience

- Charge Jurisdictions (landfills/transfer stations)/Large businesses by the lb
 - 2013: \$0.15 - \$0.25/lb
 - 2016: \$0.15 - \$0.45/lb

Some landfills/transfer stations pass charges on to residents, others cover the cost.

The market reacts to changing conditions, recent municipal bids we've seen competition bid up to \$0.55/lb

Other State Experience

- Downstream Considerations
 - Downstream restrictions as per RCRA, less stringent, fewer items considered hazardous
 - Components may be treated as fully regulated Hazardous Waste, or Universal Waste (sent for recycling)
 - Harder to recycle wood products
 - CRT Glass recycling is less restricted
 - Generally shipping downstream further, more costly
 - Colorado Annual report requires quantification of residuals and shipment locations (summary only)

Future Challenges

- Challenges of adding new materials?
 - Collection logs Residual accountability?
 - Regulations keeping up with changing materials
 - How to report & analyze net costs on constantly evolving waste streams
 - Different payments for different materials or processing methodology?
 - Keeping processing in State may be more challenging

Future Challenges - Recommendations

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- Keep State involvement in:
 - oversight of downstream management
 - management of payment amounts
- Consider alternatives to current collection log system - online resident self-certification/registration
- Keep Free Market system – let customers/jurisdictions choose their e-waste recyclers.
- Minimize paperwork requirements
- Plan for future devices – keep plan flexible
- Incorporate ability to re-act quickly to changing markets