TERU Focus Report - AB 341 Lessons Learned (so far)

Southern California Waste Management Forum Presentation
November 11, 2012 -- Michael Theroux

Introduction

California's Assembly Bill (AB) 341 adds a requirement for Commercial Waste Recycling in the state, and establishes a detailed new Policy Goal "encouraging" 75% diversion from landfill by 2020. The topic of the afternoon roundtable at the November 7th, 2012 Southern California Waste Management Forum in Pomona was “AB 341’s MCR – Lessons Learned.” This Focus Report is on my presentation in the roundtable and references the slide show that accompanied my presentation. So, open the slide show and follow along.

Panel's Task: Lessons Learned (slide 1)

Seven panelists were asked to explore the bill as it impacted their own programs and speak to the Lessons Learned so far in the first year since AB 341 was signed by Governor Brown on October 6, 2011. The speaker line-up represented CalRecycle, Los Angeles (LA) County Department of Public Works, City of Pomona, Condominium Management Services, the waste management company Republic Services, the Los Angeles County Disposal Association, and Teru (yours truly) batting clean-up..

All panelists have a clear stake in and responsibility for implementation of the state's new Mandatory Commercial Recycling (AB 341) dictum. CalRecycle went over the general provisions of the bill and the state agency's work to develop a Plan by the beginning of 2013. LA County is presented with the enormity of the task, given the population size and complexity of both the business community and the waste it generates. The City of Pomona gave the perspective from a small municipality able to "just drive over and see" when some Business reported that it had no room for a recycling bin. Condominium Management Services with their oversight of a great many multi-residence and multi-business complexes, shared functional coordination approaches. As SoCal's largest hauler, Republic explained why their company saw the new law as opening a whole new and beneficial business arena to their advantage. LA's "Voice of the Industry" disposal association tried to provide perspective from small to large, among the bill's varied impacts waste management infrastructure. Teru was there to poke large holes in everyone else's idea of what this new Mandate really means.

Read the Bill: Mandate vs. Policy (slide 2)

The very first "lesson" is to remember to read the bill. When you do, focus on what is actually *required* as a Mandate, and what is simply the Legislative Aspiration, the worthy goal, the hoped-for result of all this posturing. To help with the understanding, check Teru Talk's line-for-line AB 341 Legislative Analysis, and for lighter reading, our focus report AB 341 and the Problem with Words.

BY LAW, all commercial waste generators MUST implement a Recycling Plan … *on or after July 1, 2012.* Many very knowledgeable folks have misread this part, thinking there were penalties and public embarrassment to endure if something wasn't done BY July 1st. Fortunately, all the panelists were well aware that (a) things only got started by July 1st, and (b) that CalRecycle won't be done with the official roll-out plan for quite some time. Also, this bill does not alter the 50% diversion mandate of AB 939, it only establishes a lofty "legislative directive" that CalRecycle should seek ways for the state to reduce, recycle, or compost not less than 75% of the total amount of waste generated by the year 2020.

Why Mandatory Commercial Recycling Now? (slide 3)

There is long-standing tension between the Air Resources Board and CalRecycle that is some variation of the old childish bicker: "You do it!" "No, YOU do it!" AB 341's "Mandatory Commercial Recycling" came about not so much as a boost to Recycling, but as another key way to bring about greenhouse gas (GHG) reduction. It was first mandated by the 2006 Global Warming Solutions Act, and then called out in AB 32's

subsequent Scoping Plan. This means that the primary AB 341 directive was for air quality improvement by implementing better ways to manage waste.

What is Recycling? (slides 4 and 5)

Despite the confusion brought to the subject by common practice, intentional obfuscation, and misguided intent, the process of recycling is not a nebulous concept. Indeed, it is clearly defined in California law, Public Resources Code (PRC) Section 40180 as "… the process of collecting, sorting, cleansing, treating, and reconstituting materials that would otherwise become solid waste, and returning them to the economic mainstream in the form of raw material for new, reused, or reconstituted products which meet the quality standards necessary to be used in the marketplace."

Put another way, recycling is:

Collect > Sort > Clean >Treat > Reconstitute > Raw Material for Marketplace

Recycling is how Californians can legally turn Waste into Not Waste, what New York State refers to as "cessation of waste." But to accomplish actual recycling, the process must be completed through "reconstituting" into raw materials. Recycling IS NOT simply the act of collecting, sorting, and selling separated wastes; recycling is NOT waste brokerage.

GHG Reduction by Recycling (slide 6)

Since AB 341 came about as a means to reduce GHGs, it is reasonable that the tools needed to measure success are those that count up air emissions all along the processing path from initial collection and sorting, through cleaning and treating, and including last-stage reconstituting, or reprocessing. This step-wise life cycle assessment (LCA) methodology is perhaps a bit new to everyone, but the Air Board is certainly better versed in its application than CalRecycle … and it shows. Our waste management mentality is wholly focused on the front end of the process, the collection, sorting, and selling off of the waste materials segregated, but LCA demands that we understand the entire pathway to its completion. You can't manage what you don't count.

Reconstituting = Reprocessing (slide 7)

That last step of recycling as defined in California's PRC is further addressed in AB 341's own language, making it clear that the legislation's authors recognized (a) we must be able to complete the process to "do" recycling, and (b) it is going to take a dramatic increase in "additional solid waste processing and composting capacity" to meet the state's objectives. Reprocessing completes recycling; we need to *encourage* new reprocessing development if the 75% by 2020 goal is to be met. It is worth noting that the legislation did not specify what sort of reprocessing with the exception of stipulating that composting needed to be a key component. AB 341's approach is *technology neutral*.

Recycling Today (slide 8)

We set our trash to the curb, or drop it into a dumpster, or in some other way leave it to others to do away with our mess. We assume we have "recycled" when we drop that plastic bottle in one of those cute blue barrels. Au contraire: all we have done is start the process, sending another item of *recyclate* along its path. To what? Do you ever wonder? Once collected and sorted, those materials get sold off to whatever market will buy them for a fraction of a cent more on that particular day. Regulations require that the *amount sold* be documented for payment to the recycling service, but not the destination of the materials. In general, our agencies have very little idea as to where our segregated resources are going or what will be done with them, once received.

We *do* know that a large percentage of reprocessing occurs outside of California, and often outside of the country. This is the case because we simply do not have an adequate in-state reprocessing infrastructure; we let others worry about the environmental impacts of such reprocessing, and pay the freight to get the

materials there as part of the cost (economic and environmental) of what we assume to be actual recycling. We also know that wherever those resources went, they probably did not support California jobs.

We cannot ascertain how much of those resources are actually turned back into "raw materials ready for the marketplace" as the law requires. With no state regulation requirement to document what goes where, once recyclates are brokered, we also have no way to know what GHGs might be associated with transportation to reprocessors. With no data to associate with the supposed completion of the recycling process, we cannot hope to do any more than guess at the actual effectiveness of Mandatory Commercial Recycling as a means of GHG reduction. With a broken chain of custody affording no data, we cannot tell if indeed the pathway has ever been completed. We can't prove we have recycled.

Reprocessing Examples (slides 9 and 10)

Not all resources collected and sorted are simply brokered to distant locations. More and more, we are seeing examples of localizing that last step, and it helps to know we can actually complete the recycling process without trans-oceanic transport being an unknown GHG factor. Every time we hear about food waste being turned locally into biogas, we are actually experiencing a completed form of recycling. Municipalities and their haulers are learning how to collect the wet organic goo, sorting out some part that is quite appropriate for mixing into mulch in windrow composting. Most of the rest can be re-directed toward anaerobic digestion facilities, either stand-alone operations or as the energy generation part of advanced wastewater treatment plants. However, organics collected from supermarkets and restaurants come in cardboard and plastic packaging and contain just about anything that might get tossed into a trash barrel including lost utensils and broken glass. To become the "raw materials ready for use" as feedstock in an anaerobic digester, those segregated food wastes need to be screened, ground up, and turned into an homogeneous slurry. They need to be "reconstituted" before they can be made into the commodity of biogas.

Reprocessing the dry fraction of municipal solid waste also is a processing pathway we can observe locally, although far fewer examples have made it through California's permitting gauntlet. Recycling pre-sorted dry waste into fuel often requires that the final "reconstituting" stage use *thermal conversion* to turn the wastes into higher-value "raw materials". Remembering that AB 341 includes the *technology neutral* directive to increase processing capacity, *thermal reprocessing* should be incorporated wherever the recycling pathway dictates. This is most certainly how much of out-of-country reprocessing occurs. Whatever qualms are associated with permitting thermal conversion processing systems in California should be over-ridden by the reality of the long-distance transport GHG emissions that they replace. Once again however, we can't manage what we don't count, and we can't substitute cleaner processing if we continue to favor blind export over controlled local completion of the recycling process.

100% Recycling is Possible (slide 11)

Agencies and recycling-focused associations continue to speak of "post-recycling residuals" as if we actually knew what those residuals are. If we can't tell how, where, or if recycling has ever been completed, we simply do not know what the true residuals of that completed process might be. Instead, we assume that the act of selecting and brokering recyclates is somehow ultimately to be favored over all alternatives, and that those developing the capacity to reconstitute the recyclates must be satisfied with whatever the brokers decide to leave behind.

This pattern is NOT common elsewhere in the world, although most regions still struggle to create sufficient localized reprocessing capacity. Highly integrated recycling as defined by our own law, can be seen globally with full integration of the process from collection through sorting, cleaning, pretreatment, and reconstituting, and more often than not, including remanufacturing of those reclaimed raw materials back into marketable commodities, right on the same site. We do not lack the diversity or the efficacy of appropriate technologies. The knowledge needed to optimize and manage such complex integrated waste management / biorefinery facilities is clearly available. We certainly recognize the positive impact of accomplishing full localized recycling, since we can show how local use of our resources creates jobs while reducing GHGs.

We lack direction. We lack an administrative oversight that can actually take the *technology neutral* path to "increasing processing capacity" as the law demands. It's the Policy, and this makes CalRecycle's development of an unbiased "Plan" all the more crucial to real Recycling progress.

Parting Shots (slide 12)

Just to wrap up: we know that waste costs us all money, and we know that energy and all sorts of commodities also cost more and more money every day. We already know that by following current law, recycling is intended to make "raw materials ready for the marketplace", and that true recycling, if done locally, can quickly return money to the community that generates the waste in the first place.

However, what we *don't* know is appalling: We cannot say where our recyclates go. We cannot measure the total emissions generated by that last leg of transport. We cannot count the actual jobs lost, and really have no way of measuring the true value of the raw resources shipped outside of our careful control. Paradoxically, after all the effort and expense of all our "recycling programs", we can't even tell whether or not we have actually recycled.