Thermoform Committee of the Statewide Commission on Recycling Markets and Curbside Recycling Draft Meeting Notes

Date: January 5, 2022

Time: 9:00 AM – 12:00 PM

Present:
Commissioners Davis, Donlevy, Ferrante, Kalpakoff, Lapis, Oseguera, Sanborn

Absent:
None

Agenda:
Agenda Item 1: Call to Order, Roll Call, and Establishment of Quorum
Chair Sanborn brought the Committee to order. Commissioner Lapis was absent. A quorum was established.

Chair Sanborn noted a typo on the CalRecycle webpage with the list of Commissioners on the Thermoforms Committee. Alex Oseguera's name needs to be corrected.

Chair Sanborn noted that this may be the first and last Thermoforms Committee meeting, which will be discussed later in the meeting.

Commissioner Lapis arrived at 9:02am.

Public Comments: None

Agenda Item 2: Public Comment Review - Items Related to the Thermoform Policy Proposal
In response to the comment from Chuck Helget, Commissioner Davis asked a clarifying question about the differences between AB 478 and the Commission's current draft of the Thermoform Proposal. Specifically, he asked if the main objections to AB 478 were around the zero threshold for thermoforms in PET bales. Chuck Helget responded that one of their concerns regarding AB 478 was the zero tolerance for thermoforms in PET bales. Chuck also clarified that a major concern was that targeting the comingled rate was not the right approach for addressing the issue of thermoforms in PET bales.

Public Comments (see Appendix 1 for full comments)

- Larry Thill
- Steve Navedo
- Chuck Helget

Agenda Item 3: CalRecycle Presentation on the Beverage Container Recycling Program

CalRecycle's Hieu Le provided a presentation that addressed AB 170 (Chapter 240, Skinner, Budget Act of 2021) and the Plastic Quality Incentive Payment (QIP) Program. AB 170 authorizes CalRecycle to expend ten million dollars to provide QIPs to registered curbside programs and certified dropoff or collection programs to increase the sorting and separation of clean loads of PET containers.

Chair Sanborn asked when the bale studies would occur and how long it would take for certified entities to receive QIP after submitting application and claims. Hieu noted that CalRecycle is hoping to release the QIP application shortly and the timeline will depend on how many entities apply.

Commissioner Donlevy clarified whether each facility will be on the "honor system" for whether they are meeting the standards and then CalRecycle will retroactively get documentation to receive the retroactive payments. Hieu noted that it is more than an "honor system" because CalRecycle will go out to the facility to verify what was reported. Commissioner Donlevy further clarified that a facility would have been having to ship A Grade PET bales for the last six months of 2021 to qualify for the 2021 payments. Patty Moore clarified that A Grade is only from buyback centers, and since the QIPs are for curbside material, that it would have to be Grade B without thermoforms. Commissioner Donlevy doesn't believe any facilities in 2021 collecting curbside material would be able to meet the A Grade standards. Patty Moore clarified that there are a small number of facilities that do produce A Grade PET bales from curbside material. Commissioner Donlevy also asked if buyback material could be mixed with the curbside material to qualify for the QIP. Hieu clarified that even if the materials were mixed for the bale to qualify, the payment would still only be applicable to the portion of the bale that originated from curbside.

Commissioner Donlevy asked what happens to the program in June 2022 and will information be made public on which facilities are generating high quality bales or have made improvements in their quality. Amy Cameron of CalRecycle clarified that unexpended money goes back into the Beverage Container Recycling Fund and sunsets on June 30, 2022 unless it gets extended by the Legislature. CalRecycle can provide a list of facilities receiving QIPs, however, the amount of material would not be included in that list. Commissioner Donlevy further suggested that acknowledging the facilities producing high-quality materials would further incentivize them and help promote best practices.

Commissioner Oseguera wanted to clarify some potential misconceptions– 1) current curbside collection systems generally allow for 64 gallons of comingled recycled material plus most programs have an additional container. Fitting the recyclable materials in the bins can be challenging depending on how some materials are put into bin (e.g., boxes not broken down), but that does not necessarily indicate there is not enough volume for curbside collection; 2) There have been statements that there is both significant demand of this material and supply out there. What is not addressed is whether the folks needing these materials are willing to pay for the supply.

Commissioner Oseguera wants to hear more about addressing the supply and demand issue, because he doesn't believe that consumers should just have to pay, as previously mentioned by a presenter. He noted that consumers across California are already paying more for their material and the burden should not be continued to be put on the consumers.

Commissioner Davis noted that Hieu mentioned that the ten million dollar allocation of funds would be used and the QIPs could be reduced depending on the number of applicants. Commissioner Davis asked if there were fewer applicants, if the QIP would be increased up to the ten million dollar allocation. Hieu noted that the $180 per ton for QIP is noted in regulation, clarifying that plastic and aluminum QIP have been around since 2007, but funds have not been available since 2010.

Commissioner Davis asked if CalRecycle is considering an individual comingled rate as suggested in the current version of the Commission's Thermoform proposal. Hieu noted that it is on CalRecycle's radar for further discussion.

In response to the first comment from Mike Centers, Chair Sanborn noted that the rules are stated in law so that is not something that can be changed.

In response to Veronica Pardo's comment, it was clarified that the instructional bulletin and application would be posted on the CalRecycle website within the next week and would be announced through a listserv notice.

For the second comment from Mike Centers, Hieu noted that he would need to check in with CalRecycle's Legal to ensure a correct answer is provided.

Commissioner Davis noted that the new minimum recycled content requirement for PET bottles is a driving factor for addressing thermoforms. Specifically, how will California supply clean bales for PET bottle manufacturing.

Chair Sanborn noted the proliferation of PET clamshells and the importance of source reduction. She noted that source reduction has been absent from this discussion and that there is a concern about toxic chemical transfers from recycled content materials in food grade packaging.

Public Comments (see Appendix 1 for full comments):

- Mike Centers (1)
- Veronica Pardo
- Mike Centers (2)
- Kate Eagles

Agenda Item 4: Stakeholder Presentations and Thermoform Policy Discussion

Octavio Victal from Green Impact Plastics, a PET recycling company and one of the largest buyers of 100% postconsumer bales in North America, gave a presentation. The presentation provided an overview of their company and key challenges. Octavio noted that one of their key challenges was getting enough supply of PET thermoforms to expand. His presentation also covered the various and widespread uses of PET

thermoforms, including their use for food packaging. Octavio provided policy recommendations to stop comingling thermoforms and bottles, increasing curbside route capacity to handle volume of recyclables, and to consider EPR and drop-off locations at retail.

Commissioner Donlevy thanked Octavio for his presentation as a thermoform reclaimer and asked for clarification on whether he was processing only PET thermoforms or other resins as well. Octavio clarified that they sort out non-PET thermoforms.

Commissioner Donlevy also asked if Green Impact Plastics was able to recycle the thermoforms into food-grade thermoforms and whether FDA requires certifications for making food grade plastics. Octavio responded that they produce food grade thermoforms for uses C through H per the FDA. He also responded that FDA does have a certification process which includes criteria that collected containers must be food grade to be recycled into new food grade containers.

Commissioner Donlevy asked what the loss rate was for a mixed bale of bottles and thermoforms for their processes. Octavio noted that the bales they get have very few bottles.

Commissioner Donlevy asked if Octavio could provide further details on his recommendations around EPR or the deposit program – how he thinks it could work or who would pay for it. Octavio noted that in his opinion, the costs generally end up with the consumer. He believes consumer engagement in the program is the most important part. Commissioner Donlevy asked for further clarification about how consumers would be motivated to take their material back to a retail location or store without a deposit system.

Edward Dominion of D6 Inc. presented on his company, one of the largest bottle buyers and looking to be the first carbon negative packaging company. The goal for the primary feedstock is thermoforms, though he noted they could also take PET bottles. Edward provided suggestions for a path forward towards a closed loop, including mono-based materials, a new bin for plastics only, PET plastic mandates, and no PFAS in pulp and fiber food packaging. Edward also noted that domestically there is a demand for recycled content for thermoforms.

Commissioner Davis asked for more details on the cost of virgin vs. plastic PET. Specifically, he asked why demand for recycled PET hasn’t decoupled virgin and recycled plastic pricing. Edward noted that the primary cost is the technology to convert that waste and thus why D6 is vertically integrated to reduce those costs. He also noted the impacts of COVID and supply chain issues in recent years that have contributed to increased costs. He noted that they used to be able to buy rPET bales for $0.12 and that has increased recently to around $0.43.

Commissioner Donlevy also asked if D6 is able to recycle the thermoforms into food-grade thermoforms and whether FDA requires certifications for making food grade plastics. Edward noted that the goal of D6 is to be recycled from “tray to tray,” meaning a food grade thermoform is directly recycled into another food grade thermoform.

Commissioner Donlevy noted that bales of A Grade Bottles are higher in cost, however bales of thermoform do not have the same market price. He asked how facilities could be incentivized to separate thermoforms from bottles. He noted that it would be nice to set “floors or ceilings” to help regulate prices to support the common environmental goals and move towards recycled content.

Commissioner Donlevy asked about the statement that demand for thermoforms is up and whether there is enough supply in California to supply the thermoform reclaimers. He also asked if there are any plans for expansion into California or asked if they are placing new facilities elsewhere because other states have better supplies. Edward noted that they are putting in a lot of infrastructure in Texas. He noted that he heard only 15 or so of the MRFs in California are baling thermoforms.

Commissioner Oseguera noted the continued discussion about truth in labeling is important to this topic. He also expressed hesitation about adding more bins to curbside to collect specific materials (e.g., a bin to collect PET only) given logistics and costs.

Patty Moore, of the Plastic Recycling Corp of California (PRCC), gave an overview of findings from the PRCC PET Bale Sort. For the bale study, PRCC sorted bales into six different categories to understand content of various bale types. They sorted 18 bales from various locations. The study found that the quality in 2021 was consistent with quality found in the 2020 bale sort. She noted that PRCC first sells to California reclaimers and PRCC handles about 60% of the PET in California. The study also found that two types of Grade B material are being underpaid and three types of Grade B are overpaid. She noted that in the case of being overpaid, QIP will not have a big impact. Patty emphasized that the commingled rate is inaccurate and needs updating and that California needs healthy CRV buyback centers for bottle-to-bottle recycling.

Commissioner Oseguera asked about the PET bale price for PET Thermoform bales since the price drop seems out of line with increasing demand for PET Thermoforms. Patty Moore noted that these bale prices are for PRCC, thus do not represent national, state, or global pricing. She again emphasized that PRCC sells to California reclaimers first and that not many have shown interest in purchasing thermoform bales. The price is influenced by where they sell the material and the new content requirements for PET bottles. Bottle to bottle recycling is less costly than thermoform to bottle recycling. She also noted that pricing is very complex and that there is not a single factor that influences the pricing.

Commissioner Donlevy emphasized Patty Moore’s point that statewide comingled rate is not adequate to encourage the collection of clean PET bales. He noted that California has lost many buyback centers recently, which means the redemption rate for PET containers has gone down.

Patty noted that they are going to do another bale sort in Southern California later this year.

Commissioner Davis asked about the table showing that the A Grade bales have a 2% contamination rate. Based on their bale study, there will be a few B Grade places that will qualify for QIP.

Laura Stewart presented on behalf of the National Association for PET Container Resources (NAPCOR). She provided background on the PET market in 2020, including that the recycling rate has remained at around 30% nationally. She noted that the overall consumption of rPET is up 10% and there is not enough supply to meet demand for bottles, fibers, and other uses of PET. She noted that in order to achieve postconsumer content mandates for bottles, PET thermoforms need to be part of the supply conversation. NAPCOR estimates there is an additional 1.8 million pounds of PET thermoforms that can be recovered. In 2020, there was a 6.2 percent increase in the amount of PET thermoforms recovered in the U.S. and Canada compared to 2019. She identified key hurdles to PET Thermoform recovery, including look-alike packages, labels/adhesives/inks, intrinsic viscosity, and mechanical issues. Laura noted that most sheet and film converters prefer thermoform only bales in order to introduce feedstock in a controlled manner, however some find value with higher thermoform content if their recycling line is designed to process it. She noted that better separation will increase recycling.

Commissioner Donlevy asked if NAPCOR had data on PET Thermoforms being recycled in Mexico. Laura noted that they did not include Mexico in their existing data, but they may include it in the 2021 survey.

Chair Sanborn noted the importance of ensuring that the material is food safe and can be created into food grade containers and that it would be great to know who is testing and certifying those materials and containers. Laura noted that those responsibilities for self-certification are with the converter of the material and in the reclaimer in providing documentation on the material provided. Chair Sanborn expressed concern about self-certification without compliance review or enforcement.

Charles Helget of Republic Services spoke about AB 478 and recyclability of thermoforms. He also noted the letter he submitted as a public comment in regards to AB 478. He noted the importance of clearly defining what is meant by “thermoform” in this context since thermoforms can be applied to a broad range of products. He also noted that thermoforms can be separately sorted and baled, but that it will come at a cost that is not supported by the market price. With this, practical and economically viable solutions need to be considered, instead of considering impractical solutions like adding another curbside collection bin. At their own facilities, he has seen a range from negligible amounts to 15 percent of a PET bale being thermoforms. He believes that fixing this problem using some sort of comingled rate mandate or restrictions on the comingled rate does not make sense. He does agree that a one-size-fits-all statewide comingled rate does not seem to be equitable and there is value in having conversations about the comingled rate to make it a fair rate again. He also believes that product manufacturers should come to MRFs to understand recyclability of their products to influence product design, instead of assuming that MRFs will change their infrastructure for products.

Chair Sanborn emphasized Chuck’s point about the importance of designing for recyclability and avoiding “downcycling” in order to achieve a circular economy.

Related to the comingled rate, Commissioner Donlevy asked for clarification on whether Chuck thought all facilities should be paid the same or whether they should be paid

based on the quality. Chuck noted that he did not know the appropriate policy solution, but that he did not agree with the dialogue that people are “stealing money” through the comingled rate or that the comingled rate is a huge disincentive for separating thermoforms. He believes that they should look at the comingled rate and find a fair way to reward the people that have invested in making sure their contamination is low.

Commissioner Davis asked for clarification on the statement that $0.19 for thermoforms is not adequate and wanted to know if that was because of the cost comparison to a PET bottle price. Chuck noted that there is a need to sit down and determine the economics, but does not have a good answer for what would be an adequate price.

Camille Herrera from Driscoll’s presented on the recycled content and collection of their thermoform berry containers. She described the functional features of PET clamshells that protect the berries across its various supply chain stages. Their containers use recycled content and are recyclable. Additionally, Driscoll’s would not switch to a fiber-based alternative with PFAS coating or another option that might have other health effects. They prefer recyclable packaging over compostable due to lack of facilities that accept compostable packaging. Driscoll’s identified three main challenges with the recyclability of the PET clamshells: labels and adhesives, the intrinsic viscosity (IV) of the material, and lack of infrastructure to get thermoform only bales. They have been working with their collaborators to address the challenges for their container. Driscoll’s directed suppliers to have at least ten percent postconsumer content in their containers derived from recovered thermoforms by the end of 2020.

Commissioner Donlevy asked for clarification from Camille on what is meant by “recycle-ready.” It means that the thermoform packaging has a label change from paper to BOPP (or biaxially-oriented polypropylene), using a washable adhesive, and finding a berry pad alternative.

Commissioner Donlevy asked if Driscoll’s is participating in any innovation on moving from plastic to fiber clamshells for berries. Camille answered that they are piloting other materials, however, their packaging has specific requirements for handling moisture and temperature changes, and they have not yet found anything that will work at scale and without adding PFAS.

Commissioner Oseguera asked about the packaging that was used prior to thermoforms. Camille answered the Driscoll’s has been using thermoforms since the 1990’s.

Commissioner Lapis thanked Driscoll’s for their information and transparency. He asked about Driscoll’s stance related to AB 478 and noted that PET clamshells will likely not be able to be labeled as recyclable under SB 343. Camille responded that Driscoll’s stands with the CA Strawberry Commission. They agree with the intention of the bill however it did not address the supply issues happening at the community and MRF level. She also noted that the language of SB 343 leaves users of PET clamshells in a precarious position at this time. Commissioner Lapis followed up asking for the solution to this issue of thermoforms not likely being considered as recyclable under SB 343 and how that aligns with Driscoll’s goals. Camille noted that Driscoll’s is a berry company

and they are doing what they can in the space where they have control to make a difference and be transparent.

Public Comments (see Appendix 1 for full comments):

- Paul Bahou
- Anonymous (1)
- Daniela Sanchez
- Ron Milo
- Anonymous (2) – published, but not read

Agenda Item 5: Process for Thermoform Policy Proposal Development & Next Steps

Chair Sanborn suggested identifying portions of the thermoform policy where there is agreement in the short-term and to remove components that do not have agreement for later discussion. The version of the policy with the parts where there is agreement will be presented to the full Commission at the January 19th meeting. Commissioners discussed the latest version of the Thermoform Policy Proposal.

Chair Sanborn asked if there is agreement by Commissioners that the statewide comingled rate is an issue that needs to be addressed even if they are not in agreement on how to address it.

Commissioner Donlevy noted that #1 and #6 of the proposal are similar but believes the suggestion should go beyond PET thermoforms to include all materials (e.g., metal, glass). He further noted that the rate should reflect the quality of the material in the bales. Commissioner Oseguera noted that #1 and #6 are very broad and has concerns about supporting them. He would support additional funding for PET thermoform recycling separate from existing funding, but is concerned about opening up to a more broad suggestion for overhaul of the existing system in place.

Commissioner Kalpakoff is concerned that the demand for recycled thermoforms is rising but the price is going down. He has heard several people ask today how we are going to pay for this with the price going down. He noted that he did see the value of keeping the two forms of PET, bottles and thermoforms, separate for recycling. He believes the individual MRF comingled rate could help achieve the goals as long as it does not penalize facilities with lower quality.

Commissioner Lapis expressed concern that there may not be a lot of consensus around this proposal. He believed that #5 of the proposal (recycled content requirements for PET thermoforms) should be the main focus of the recommendations.

Chair Sanborn followed up that as one of the presenters noted, the statewide comingled rate is problematic. Thus, how are the berry manufacturers and others going to support a recycled content mandate if they are unsure about the available supply to meet the mandate? Will manufacturers and producers be willing to split the costs to be able to collect thermoforms separately?

Commissioner Ferrante agreed that the producers and manufacturers should be paying the cost of processing this material. She expressed concerns about claims by thermoform manufacturers that the PET thermoform recycling market is there.

Commissioners Davis and Oseguera will work together as a two-person Committee on the Thermoform Proposal and will present something at the January 19th meeting.

Public Comments (see full comments in Appendix 1):

- Kate Eagles (2) – published but not read
- Jason Ball – published but not read

Agenda Item 6: Data Requests

No new data requests were made.

Public Comments: None.

Agenda Item 7: Meeting Summary and Closing

The meeting was adjourned at 12:00 pm.

Public Comments: None

Appendix 1: Public Comments

Larry Thill

you are proposing that residents sort their food scraps, yet nothing is done about all the fast food garbage that contains food and paper and plastic packaging. it would take me a month to equal one day at any fast food store.

Steve Navedo, Navedo Management Group, LLC

Submitted with respect: I am a 30+ year postconsumer plastic recycling professional, focused on rPET; I have been a Sustainability Director for a national food packaging PET thermoforming company, and past APR Board Chairman. My main message is that PET thermoforms are recyclable within the US postconsumer plastic industry, and SHOULD NEVER BE CLASSIFIED AS "NOT RECYCLABLE". Whether sorted apart from PET bottles or included with PET bottle bales, the thermoforms are being recycled. Granted- sorting thermoforms for separate recycling away from PET bottles is preferred because of varying technical characteristics between bottles and thermoforms. However, your 2% threshold of Tform inclusion in bales does not acknowledge that, for years, US PET reclaimers have accepted 10% Tforms in their bales. Declaring PET Tforms as "not recyclable" just because they are not pre-sorted goes against every effort to increase plastic recycling in this country. Sort Tforms for recycling- "Yes", the right thing to do. Declaring Tforms "not recyclable"- "NO" regardless of how they are collected for recycling. I recently authored an article that was published in Resource Recycling magazine and Plastics Recycling Update: "MOVING TOWARDS WIDELY RECYCLED" https://resource-recycling.com/plastics/2021/11/24/thermoform-recycling-realities/ This narrative is a very good summary of the PET Tform industry and proper steps to increase their recycling rate. Thank you for your attention to my comments and

for your efforts to address the plastics recycling challenges we are all facing. Respectfully submitted: Steve Navedo steve@navedogroup.com

Chuck Helget, Republic Services

We are submitting an industry letter regarding the discussion of thermoforms and want the Commission to be aware of our industry concerns that were formally submitted to the Legislature last year. The content of the original letter is below: "We have supported minimum content legislation in the past. But the provisions in AB 478 (Ting & Irwin) will have significant negative impacts on the current recycling system for the benefit of a single form of plastic. Who will Bear the Cost and in what Amount? State of California The Assembly Appropriation Committee Analysis estimated the following costs to the State of California: 1. One-time costs to CalRecycle of $539,000 in Fiscal Year 2022-23, and $660,000 in Fiscal year 2024-25, for additional staff to develop applicable regulations and reporting mechanisms for thermoform producers, and assist with data analysis and corrective action plans; 2. Ongoing annual administration and implementation costs beginning in Fiscal Year 2025-26 to CalRecycle of $658,000; and 3. Unknown but potentially significant enforcement costs to CalRecycle to ensure compliance with this bill. Without an alternative specified funding source, these costs are expected to be borne by the Integrated Waste Management Account (IWMA). Rate Payers While we support many of the provisions in this bill as amended on June 17, 2021, we are concerned that the bill will allow the bill's sponsor to benefit off of the current California Beverage Container Recycling and Litter Reduction Act and the IWMA, without making any financial contribution to a program that is already under stress. This bill revises the "commingled rate" definition in the state's beverage container recycling program to benefit a material form (PET thermoform) that is not covered by, nor contributes to, the California Beverage Container Recycling and Litter Reduction Program. It is important to note that the revisions to the "commingled rate" and the resulting impacts will take effect on January 1, 2022 while the minimum content provisions that seek to create a thermoform plastics market don't take effect until January 1, 2024. As a result, potential loss on CRV revenues would begin in early 2022, leaving recyclers with mere months to make the operational and infrastructure changes needed to separate PET thermoforms without the benefit of knowing if the infrastructure changes are even feasible or will achieve the desired goal of segregating thermoform plastic from other PET. We are concerned that the sponsors of AB 478 are trying to benefit from the Beverage Container Recycling Act, by leveraging the definition of "commingled rate" but are unwilling to financially contribute to the program. Instead, the cost of implementing AB 478 will be shifted to others, primarily rate payers. Unfortunately, the loss of CRV revenue and the additional operational and infrastructure costs will be passed on through local rates to residential and commercial customers. This cost increase will be another in a series of rate increases based upon statutory and regulatory changes that these ratepayers can ill afford now. Therefore, to address our concerns, we urge AB 478 be amended as follows: • Strike Sec. 2 and Sec. 3 in their entirety to remove the negative impacts these Bottle Bill provisions will have on the recycling industry and local jurisdictions. • We also urge the sponsors to consider some financial mechanism by which producers offset the cost differential between the cost to recycle that container type and the value that type of recycled material fetches on the marketplace. This can be in the form of a producer financial responsibility fee or

assessment that will offset the costs to the state of California and contributes to a payment that recyclers receive or some other kind of incentive offered to recyclers to separate PET thermoforms. AB 478, as amended August 16, 2021, now imposes no responsibility on the manufactures of thermoform plastic. AB 478 as amended on June 17, 2021, seeks to have thermoform manufacturers free load off of the current Beverage Container Recycling Act, without making any financial contribution to a program that is already under stress. Instead, the cost of implementing AB 478 will be shifted to others, primarily rate payers. AB 478 Impacts All Containers Covered Under the Bottle Bill AB 478 has a fatal flaw in that it will change the definition of “commingled rate” for all types of containers covered under the California Beverage Container Recycling and Litter Reduction Act, not just thermoform plastic containers. Under current law, “commingled rate” is the ratio of empty beverage containers to all other containers of the same material type. In effect, the commingled rate prohibits recycling centers and processors from paying curbside programs more than the applicable statewide average curbside commingled rate unless the curbside program has received an individual commingled rate from CalRecycle. The “commingled rate” helps ensure that recyclers are only paid the California Redemption Value (CRV) on CRV-eligible containers. The implications of changing the “commingled rate” definition in the California Beverage Container Recycling and Litter Reduction Act to benefit a PET thermoform container that is not covered by the Act go well beyond the bill’s stated purpose of enhancing recycling of thermoform plastics. By revising the calculation of “commingled rate” for all containers covered by the state’s bottle bill, they are revising the commingled rate calculation for all CRV-containers. The implications of this change are very troublesome since, as discussed below, the changes are undefined and therefore vague. AB 478, as amended on June 17, 2021, adds the term “form” to the definition of “commingled rate” in the California Beverage Container Recycling and Litter Reduction Act impacting the commingled rate calculation for aluminum, glass, plastics, and bi-metal beverage containers. This change provides that the “commingled rate” calculation must now include not only the “type” of material but the “form” of a container as well. The term “form” is undefined and in our view this language is problematic. AB 478 Tries to Mandate That Thermoform PET Be Aggregated and Segregated at all Material Recovery Facilities, But Will Likely Result in More Thermoform PET Going to Disposal We are concerned that the bill sponsor may want to interpret this change in the “commingled rate” definition to mean that a commingled rate calculation and CRV payment will not be allowed for any PET beverage container bales that contain any level of PET thermoform containers. It is our interpretation that the proposed change to the “commingled rate” definition would only change the way the commingled rate is calculated not the way CRV payment is made using the commingled rate. The sponsor’s erroneous interpretation would result in a significant loss of revenue for recyclers. Under their interpretation, the bill sponsor assumes this threat of a revenue loss would in effect mandate the separation and aggregation of PET thermoform including all PET thermoform containers, lids, boxes, trays and egg cartons at our material recovery facilities. Any material recovery facility that is unable to separate and segregate thermoform PET from CRV-PET bales would not be able to collect a commingled rate for CRV-PET bales denying our recycling programs a significant revenue stream. In reality, the loss in revenue coupled with the cost associated with

separated out thermoforms, as discussed below, would more likely result in curbside programs no longer collecting thermoforms for recycling. PET Thermoform Is Currently Being Recycled with CRV PET Bales. PET thermoform containers are difficult and costly to separate and aggregate at material recovery facilities. Because they are a form of PET, existing technologies at our facilities do not readily distinguish thermoform PET from CRV PET. Thus, if thermoform PET is thrown in the blue recycling bin by our customers, these two types of PET will often be aggregated into the same bale. This is not a significant problem as claimed by the AB 478 sponsor since mixed bales are acceptable to many reclaimers today. A recently released Fact Sheet by the National Association of PET Resources (NAPCOR) states: “Reclaimers representing the majority of U.S. capacity report they routinely process PET thermoforms with PET bottles.” In their recent report “2020 PET Thermoform Recycling: A Progress Report”, NAPCOR concludes that “PET thermoform recycling has increased substantially in the United States and Canada since NAPCOR began tracking it in 2011. Between that time and 2019 domestic reclamation of PET thermoforms has more than quadrupled, though some technical and design for recyclability issues remain.” So, while issues remain, PET thermoform can be recycled through the existing infrastructure without an expensive separation and aggregation requirement for every material recovery facility in California. AB 478 Will Require the Material Recovery Facilities to Invest in Expensive Operational Changes, Facility Expansions AND Robotics AB 478 will require that every material recovery facility invest millions of dollars per facility to purchase and install processing equipment and robotics that will separate and aggregate PET thermoform from PET beverage containers. Without the addition of expensive robotics at every material recovery facility in California, it is virtually impossible to ensure that no PET thermoform is in a non-thermoform CRV PET bale. This requirement is complicated by the fact that many material recovery facilities are already space constrained and the operational changes and addition of new processing equipment will be impossible without major structural changes and permit revisions. Because there is only a small amount of thermoform currently in our recycling bins, we will be required to store thermoform PET bales for as long as a month before we have enough material to ship to a reclaimer. Facilities that have the space will still be required to add automation to capture PET thermoform because manual sorting of this material is inefficient. As noted in the above mentioned NAPCOR report: “Not all thermoforms are PET. Before you attempt to separate and market PET thermoforms, implement best sorting practices to minimize contamination and maximize quality. Most reclaimers currently accepting PET thermoforms prefer auto-sorted material.” We want to express our appreciation to the authors for being willing to discuss these concerns. We understand that they will be convening meetings during the legislative summer recess to discuss these concerns and seek resolution. We look forward to participating in these discussions. Sincerely, Executive VP Doug Kobold Gary Clifford Executive Director Athens Services California Product Stewardship Council John Kelly Astor, Esq. David Fahrion Legislative Affairs Chief Executive Officer California Waste Haulers Council California Waste & Recycling Association Charles Helget Laura Ferrante Director, Government Affairs Legislative Advocate West and Southwest Areas Resource Recovery Association California Republic Services, Inc. John Kennedy Priscilla Quiroz Legislative Advocate Legislative Advocate Rural County Representatives of California Solid Waste Association of North

America Legislative Task Force Susan VanDelinder Alex Oseguera Division Vice President Director of Government Affairs Waste Connections Waste Management"

Paul Bahou, Global Plastics Recycling

Simplicity is key here: Bottle bales should only have bottles, Thermoform bales need to be their own grade. All thermoform bales should be optically sorted before hitting the market and brand owners need to be incentivized to only make these items out of PET. PVC thermoforms aren't only non recyclable, they contaminate all the PET. This is well within our ability to fix.

Mike Centers (1), Titus MRF Services

Please do not pay for past periods. Claims need to be for 2022 and beyond in order to insure you can audit those who submit claims. I wholly support it is operated just like the glass quality incentive payments.

Veronica Pardo, Resource Recovery Coalition of CA

When will we be able to submit for the new Plastic QIP?

Mike Centers (2), Titus MRF Services

If a curbside number holder is claiming for B Grade PET as B grade PET without thermoforms is in my opinion fraudulent claims. There is no such thing as B grade PET that does not have significant contamination to include thermometers. Titus has tested these bales. If a processor is mixing buyback with curbside, why? what value does that provide? Those who do this are attempting to meet grade A bales? If they do make grade A bales by mixing buyback then it should not qualify for the QIP given it is for Curbside or collection programs only. Also this is for collection programs to be consistent with the glass quality incentive payment I disagree that you have one facility that has generated a high quality bale that has met QIP level of quality but this incentive is very important for the industry to have a reason to improve

Kate Eagles, Association of Plastic Recyclers

What is QIP supposed to incentivize with respect to more MRFs pulling out and marketing PET thermoforms separately from their PET bottles, then selling to reclaimers such as Octavio. Not clear to me.

Ron Milo, City of LA Public Works

Greetings. I have a question concerning a thermo formed plastic container is made of plastic #6 (PS material, which is formulated for thermoforming process). Referencing from the definition of “thermoformed plastic container” are formed from an extruded resin. This extruded resin material includes but not limited to PETE (#1), HDPE (#2), PP (#5), & PS(#6). Although from AB478 Section 1 finds & declares that for the past two decades PETE thermoformed clamshells packaging has contained the most CA recycled content of any food packaging in the US. This is good news. My question is, what will happen to the thermoformed plastic container made of extruded PS (#6) resin material as far as AB478 is concerned? As we all know, PS has no market value at this time. Any information is greatly appreciated. Thank you & Happy New Year.

Daniela Sanchez, DAK AMERICAS

We are one of the Biggest reclaimers in the US for bottle to bottle resin. Currently we are recycling thermoforms coming into the curbside material, so its possible to have thermoforms back to into bottles. However, as it has been mentioned we need a defined thermoform content in the bales, and certainly having monolayers will solve several quality issues. Any ideas on how to incentivize MRF´s to control the % of thermoforms in the bales? Daniela Sanchez Global rPET Procurement DAK Americas

Anonymous (1)

Questions for Republic: Can we control the % of thermoform in the curbside bales? What extra cost this will bring? Controlling and increasing the % thermoform in the bales will reduce the direct and direct cost on landfill, so may the extra cost be paid by its own savings?

Anonymous (2) – Published, but not read

Question for Driscoll What are the label initiatives your are following to help recyclability of packaging? Are you using any additive in your packaging that makes recyclability more complex?

Kate Eagles (2), Association of Plastic Recycler – Published, but not read

A recycled content mandate is a “demand” initiative and requires supply, as Camille just pointed out. A change to the commingled rate must be a part of this if we are going to incentivize PET thermoform sortation to meet recycled PET thermoform content demand. Price is not going up because the market signals remain confused – there is not enough consistent supply for market to stabilize!

Jason Ball, Reterra Corporation – Published, but not read

PET Thermoforms are extremely important to the PET recycling stream as the demand for RPET has began to out grow the supply. We are Chemical Recyclers of PET and have been doing it commercially for over 22 years. Thermoform PET is a great stream for us, but it is also a great stream to use back into thermoforms and into fiber. The only problem with thermoforms is that some of them are made out of PS, PVC or PETG all of which contaminate the thermoform stream and make it harder to recycle the material. If all thermoforms in California were made out of PET, it would be very easy to recycle them and the amount of thermoforms recycled would explode.