

## Additional ACC Comments on CalRecycle Packaging Workshop Background Paper: Increasing collection and recovery of packaging in California

### Responses to CalRecycle Questions

#### Definition and Scope

1. What are the significant opportunities and challenges associated with each?

The definition and scope must include all materials and types of packaging. If CalRecycle focuses only on certain types of packaging for mandatory programs, manufacturers may switch to alternative materials of packaging types to simply avoid regulatory requirements. By not creating equal requirements for all packaging materials and types, unintended environmental impacts, such as increased waste or increased greenhouse gas (GHG) emissions could result. For example, a recent life cycle based study of packaging concluded that using alternatives to plastic packaging would create greenhouse gas emissions by 130 percent.<sup>1</sup>

The most current data available shows that over 85 percent of California households can recycle polypropylene (PP) non-bottle rigid containers curbside.<sup>2</sup> The information on the recyclability of materials in California communities referred to in the Background Paper should be updated to reflect current conditions.

Furthermore, this outdated information affects CalRecycle's prioritization methodology. The current prioritization is based on antiquated categories and fails to recognize the dramatic growth in the collection of non-bottle rigid containers and PE film recycling programs. For example, *Table 2 List of Packaging Products by Material Type* fails to recognize the recyclability of many of the items listed, including clean polyethylene film, many types of non-bottle rigid containers especially those made of polypropylene.<sup>3</sup> Additionally, *Table 7 Packaging Materials in California's Disposed Waste Stream* lumps vinyl, Formica, and linoleum in with packaging, which may inaccurately increase plastics packaging total in a way that is misleading.

In prioritization ratings, neither source mentioned in the Background Paper provides a basis for rating all other plastic containers high for marine debris. For example, there is no basis to conclude that PVC containers represent a high percentage of marine debris. Moreover, PET containers should be included in the prioritization for non-bottle rigid containers.

References in the Background Paper to biobased, biodegradable, and compostable products are confusing. These terms are not synonymous. From a waste perspective, the Paper should focus on compostable plastics, which are the only materials of these three types that have a separate recovery infrastructure.

The Background Paper discusses a goal of reducing GHG emissions without quantification and metrics to measure reductions and proposed solutions to meet the 75 percent diversion goal will likely incentivize changes that would increase, not decrease, GHG emissions. In *Table 5*, the GHG numbers for many plastics should be corrected and characterized as low. The referenced

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<sup>1</sup> Franklin Associates, "Impact of Plastics Packaging on Life Cycle Energy Consumption and Greenhouse Gas Emissions in the United States and Canada: Substitution Analysis," January 2014.

<sup>2</sup> Moore Recycling Associates, Inc., "Plastic Recycling Collection: California Reach Study," July 2011.

<sup>3</sup> Ibid.

ARB study assumes that mixed plastics are a mix of 71% PET and 29% HDPE. It is incorrect to rely on ARB's assumption that the Recycling Emission Reduction Factor for "mixed plastics" only consists of PET and HDPE resins. According to EPA's waste characterizations, a number of other resins should also be taken into account when evaluating the Recycling Emission Reduction Factor for mixed plastics, including LDPE/LLDPE, PLA, PP, PS, and PVC.<sup>4</sup>

The discussion of plastic film, on page 13, should recognize the gains in environmental benefits that are achieved by switching from rigid containers to films, including the fact that alternative packaging would increase GHG emissions by four times and double energy use.<sup>5</sup> In addition, the Background Paper should recognize that over one billion pounds of polyethylene film are recycled every year in the United States, and that collection infrastructure exists throughout California to collect PE film along with traditional or reusable plastic bags at retailers.

With respect to the pouches discussion on page 12, what is the meaning of the term "downcycled" in the footnote? ACC is aware of some programs that recycle pouches into longer life products that can be more valuable than the original product. And, film and other flexible packaging are often made into composite decking with long, durable use. Would these be considered downcycling? Additionally, the Background Paper should recognize the potential to convert pouches back into their original feedstocks or fuel. This has recently been demonstrated in a pilot project in Citrus Heights, California.<sup>6</sup>

2. Are there suggested alternative approaches, selection criteria, etc., and what is the rationale for the suggestion(s)?
  - a) **Curbside recycling:** CalRecycle should take a closer look at opportunities to increase the collection of materials that are now accepted in curbside recycling programs but may currently have low recovery rates. For example, as noted above, non-bottle rigid containers are recyclable in most of California, but awareness of what is recyclable is inadequate.<sup>7</sup> The widespread access to plastic recycling should be accompanied by a common language to describe items acceptable for plastic recycling.<sup>8</sup> Focusing on this obvious opportunity can be cost effective and help increase the recycling of these materials.

Additionally, we invite CalRecycle to join the Wrap Recycling Action Program (WRAP). WRAP is a partnership that includes the Sustainable Packaging Coalition (SPC), the state of Wisconsin, the Association of Postconsumer Plastics Recyclers, ACC, and several

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<sup>4</sup> U.S. EPA, Office of Resource Conservation and Recovery, "Municipal Solid Waste Generation, Recycling, and Disposal in the United States: Tables and Figures for 2012," February 2014, Table 7, [http://www.epa.gov/osw/nonhaz/municipal/pubs/2012\\_msw\\_dat\\_tbls.pdf](http://www.epa.gov/osw/nonhaz/municipal/pubs/2012_msw_dat_tbls.pdf). LDPE = Low density polyethylene; LLDPE = Linear low density polyethylene; PLA = Polylactide; PP = Polypropylene; PS = Polystyrene; and, PVC = Polyvinyl chloride.

<sup>5</sup> Franklin Associates, "Impact of Plastics Packaging on Life Cycle Energy Consumption and Greenhouse Gas Emissions in the United States and Canada: Substitution Analysis," January 2014.

<sup>6</sup> For more information about the "Energy Bag" Plastics-to-Energy Pilot Program in Citrus Heights, California, see <http://www.dow.com/packaging/news-events/2014/20140515a.htm>.

<sup>7</sup> Moore Recycling Associates, Inc., "Plastic Recycling Collection: California Reach Study," July 2011.

<sup>8</sup> Ibid.

brand owners. WRAP's goal is to double polyethylene film recycling by 2020.<sup>9</sup> WRAP is working to meet this goal by promoting the SPC's How2Recycle label for returning film to stores, providing in store signage and improving infrastructure. WRAP is consistent with California's other programs that require stores to recycle plastic bags. WRAP has the added benefit of reducing PE film in material recovery facilities (MRFs), which, for facilities that rely on rotating screens to sort containers from fiber may clog equipment, adding costs and decreasing efficiency.<sup>10</sup>

- b) **Source reduction:** CalRecycle should include source reduction as one of the potential alternative approaches to meeting the diversion goal. For example, many consumer product packaging products have shifted to plastic (particularly flexible films and pouches) because of some of the dramatic environmental and economic benefits compared to other package types (e.g., less material, less fuel need to transport, less GHG emissions, etc.). The Background Paper mentions source reduction as part of the 75 percent initiative, and needs to more fully consider the source reduction benefits of currently non-recyclable packages, including pouches.

Source reduction efforts can be measured on a particular product basis and encompass a broad range of activities to reduce the amount of packaging and prevent waste by changing the design, manufacture, purchase or use of materials, products, or packaging.<sup>11</sup> Weight ratio comparisons may be made to establish the benchmark material weight of packaging at a certain date and to make subsequent weight ratio comparisons to document source reduction.

- c) **Food waste diversion:** CalRecycle should prioritize food waste for diversion from landfills. Additionally, it is critical that CalRecycle also understand and acknowledge the role that innovative packaging – many times multi-layered plastics packaging – plays in the reduction of food waste. Generally, the Background Paper could be improved by acknowledging the many benefits packaging provides to minimize food waste.
- d) **Energy recovery:** CalRecycle should consider what role new technologies (e.g., plastics-to-oil, energy recovery, plastics to fuels, etc.) can play in helping the state meet the long term objective of reducing landfill disposal.<sup>12</sup> Creating new policies that recognize the beneficial role these technologies may have must be considered as part of the comprehensive approach to meet the diversion goal. Currently, plastics-to-oil and energy recovery technologies are regulated as “disposal” under California law, thus, communities have no incentive to consider these as viable alternatives, given they do not count towards CalRecycle's goals.

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<sup>9</sup> WRAP, [http://www.plasticfilmrecycling.org/wrap/wrap\\_home.html](http://www.plasticfilmrecycling.org/wrap/wrap_home.html).

<sup>10</sup> Moore Recycling Associates, Inc., “2011 National Postconsumer Plastic Bag & Film Recycling Report,” February 2013, <http://plastics.americanchemistry.com/Education-Resources/Publications/2011-National-Post-Consumer-Recycled-Plastic-Bag-and-Film-Report.pdf>.

<sup>11</sup> Franklin Associates, “Waste Management and Reduction Trends in the Polystyrene Industry, 1974 – 1997,” August 1999.

<sup>12</sup> 4R Sustainability, Inc., “Conversion technology: A Complement to plastic recycling,” April 2011, <http://plastics.americanchemistry.com/Plastics-to-Oil>.

## **Policy Approaches**

### **CalRecycle should consider the following with regard to a mandatory Extended Producer Responsibility (EPR) program:**

1. What would need to happen for the approach to be successful? Who needs to be engaged?
  - a) Gather data to evaluate effectiveness of programs like EPR (general terms): Data collected on EPR programs for consumer packaging do not support EPR as a preferred policy approach for end of life management for packaging and printed paper. In 2012, SAIC conducted an “Evaluation of Extended Producer Responsibility for Consumer Packaging,” sponsored by the Grocery Manufacturers Association, which concluded the following:<sup>13</sup>
    - There is no evidence to support the assertion that EPR causes changes in packaging design or selection.
    - The influence of EPR on achieving high recycling rates through increased funding is difficult to assess when EPR is often coupled with energy recovery, landfill restrictions, disposal surcharges or taxes, as well as recycling.
    - Rather than resulting in more efficient programs, EPR results in three areas of cost increases: government costs to regulate producers; administrative costs incurred by regulated producers (participation in consortia); and increased consumer taxation, when the cost of providing the recycling service is shifted from a municipal budget or untaxed utility bill and incorporated into the price of the product that is subject to a retail sales tax.
    - Other waste programs can provide a more equal system of waste management in which consumers pay the cost of their own consumption (e.g., Pay-as-you-throw (PAYT) programs).
  - b) Evaluate the likely effectiveness of programs like EPR in California: CalRecycle should evaluate the effectiveness of EPR compared to an increase in the recycling and recovery of packaging (and resulting reduction of waste). The Background Paper provides no such data or comparisons. Simply citing to isolated examples of EPR’s success in Europe and Canada do not represent a complete assessment of the programs. In fact, the perceived success of EPR (or diversion success) in the particular European countries is a result of multiple factors that were not fully discussed in the Paper, including the fact that these countries have landfill bans or very high tipping fees, an existing culture of recycling, and, in some cases, use energy recovery.<sup>14</sup> It is our understanding that implementation of EPR in British Columbia, Canada, is causing problems for at least one plastics recycling company that is not part of the EPR consortium. The company expects to lay off a number of employees and to shut down a plant, which converts

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<sup>13</sup> Final Report, “Evaluation of Extended Producer Responsibility for Consumer Packaging,” Grocery Manufacturers Association, September 2012, prepared by SAIC, [http://www.gmaonline.org/file-manager/Sustainability/GMA\\_SAIC\\_EPR\\_Report\\_091112.pdf](http://www.gmaonline.org/file-manager/Sustainability/GMA_SAIC_EPR_Report_091112.pdf).

<sup>14</sup> Ibid.

recyclable plastic into pellets for sale to other firms.<sup>15</sup> Under the new EPR program, Multi Material BC awarded a five-year contract to process recyclables to the Green By Nature consortium that includes larger companies and competitors of the aforementioned plastics recycler. It is our understanding that the program created a monopoly, taking away feedstock and business from companies outside of the consortium.<sup>16</sup>

2. How does the approach impact/complement existing California programs?  
EPR would upend existing California programs, remove local control of recycling programs by turning them over to national corporations for implementation, potentially strand uncompetitive municipal assets, and reduce the incentive of consumers to put recyclable materials in the recycling bin (discussed further below).
3. What are some possible undesirable unintended consequences of the approach and how might these be mitigated?
  - a) EPR may disengage consumers from recycling: EPR would reduce consumer incentive to recycle because it provides consumers with an expectation that the fee they pay at the outset absolves them of responsibility to recycle (i.e., consumers may think, “they can sort it out at the landfill; I’ve already paid for that service”). Today there is a shared responsibility between manufacturers, consumers and the public sector. Therefore EPR, by making producers solely responsible, reduces the incentive for people to put recyclables in the bin.

Unless EPR programs are accompanied with tax reductions, which are not discussed in the Background Paper and would likely be difficult to obtain, taxpayers would continue to pay taxes for services that are no longer provided. In addition, taxpayers would pay a hidden regressive tax on their everyday purchases.

- b) Adopt “Pay-as-you-throw:” Adopting a “pay-as-you-throw” program for trash has the advantage of keeping the incentive to recycle front and center for citizens and businesses. Shown to be highly effective, programs where residents are charged for the collection of municipal solid waste based on the amount they throw away keep citizens engaged and local officials involved in managing recycling and recovery programs.<sup>17</sup>

CalRecycle should pursue programs that have documented success in increasing recovery such as pay-as-you throw. PAYT should be considered as a mandatory approach. It has repeatedly been shown to be effective at raising recycling rates.<sup>18</sup>

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<sup>15</sup> “Plastics Plant to Close – Maple Ridge (April 8, 2014),” <http://www.fvessc.com/plastics-plant-close-maple-ridge>; and, “Will British Columbia’s EPR effort kill plastics recycling firms? (April 10, 2014),” <http://www.resource-recycling.com/print/4776>.

<sup>16</sup> Ibid.

<sup>17</sup> Skumatz, Lisa A., Ph.D., and J. Freeman, “Increasing Recycling Now! Guidebook for Community Adoption of Recycling and Pay As You Throw (PAYT) Ordinance: Practical Guide and Model Language for Communities,” Skumatz Economic Research Associates, Inc., August 2008, [http://www.paytnow.org/PAYT\\_OrdinancesReportSERA\\_v4.pdf](http://www.paytnow.org/PAYT_OrdinancesReportSERA_v4.pdf).

<sup>18</sup> Ibid.

Because the consumer decides whether to dispose of a package in the trash or recycle it, PAYT properly focuses the incentive. It provides a strong incentive for consumers to learn what packages are recyclable. Through enhanced communication and education consumers can be encouraged to purchase and recycle recyclable and recoverable products.<sup>19</sup> Stronger education and community based education programs should also complement PAYT programs.

- c) Think comprehensively: When considering various policy approaches, CalRecycle should think comprehensively – beyond EPR – by evaluating multi-faceted solutions that include elements of each “R,” Reduce, Reuse, Recycle, Recovery, and Redesign. For example, crediting source reduction in packaging,<sup>20</sup> developing waste-to-energy infrastructure, PAYT programs,<sup>21</sup> and increasing access to recycling.
4. What key considerations do you think are missing for each approach?
- The key consideration missing for EPR is data on the effectiveness of EPR as a stand-alone program, compared to other efforts, such as increasing recovery and reducing waste. In addition, CalRecycle has failed to examine compliance costs that can acutely affect small businesses. EPR advocates often point to Europe, particularly northern Europe, as an example of successful EPR programs. Northern Europe has landfill bans or very high tipping fees, strong education programs and a culture of recycling, and fully uses energy recovery technologies as a complement to mechanical recycling.<sup>22</sup> Whereas, the U.S. waste management system is managed at the local level, and does not have the same dynamics as Northern Europe. California should take this into account when considering EPR recommendations.

**CalRecycle should consider the following with regard to landfill bans for recyclable materials:**

1. What would need to happen for the approach to be successful? Who needs to be engaged?
  - a. Landfill bans, or, from a more positive perspective, mandatory recycling, can boost recycling rates of specific containers with strong existing end markets – such as plastic bottles, rigid containers and polyethylene film, and aluminum cans. Mandatory recycling programs, coupled with strong educational programs, have demonstrated an increase in recovery in other states, like North Carolina.<sup>23</sup> Mandatory recycling requires that recyclers, waste haulers, and local government be involved in the recovery process.

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<sup>19</sup> For example, see ACC’s terms and tools, <http://www.americanchemistry.com/Media/PressReleasesTranscripts/ACC-news-releases/New-Plastics-Recycling-Terms-Tools-to-Help-Communities-Recycle-More-Plastics.html>; or <http://www.recycleyourplastics.org/>.

<sup>20</sup> Innovations to light-weight and reduce the material used in certain food packaging helps keep food fresher, longer. In the absence of crediting source reduction, food waste may increase if communities switch to less effective packaging types, because some examples of source reduction are less recyclable than former packaging products.

<sup>21</sup> AMERIPEN, “Analysis of Strategies and Financial Platforms to Increase the Recovery of Used Packaging,” August 2013, [http://ameripen.org/wp-content/uploads/AMERIPEN\\_Recovery\\_White\\_Paper\\_Final\\_August\\_27-2013.pdf](http://ameripen.org/wp-content/uploads/AMERIPEN_Recovery_White_Paper_Final_August_27-2013.pdf), p. 18-21.

<sup>22</sup> The Northern European experience is in contrast to Southern Europe, where landfill bans and energy recovery are not used as much as in Northern Europe, and recovery rates are much lower.

<sup>23</sup> “Bottle ban helps boost recycling, but officials seek more effort,” Newsobserver.com, [http://www.newsobserver.com/2012/02/18/1864251\\_bottle-ban-helps-boost-recycling.html?rh=1](http://www.newsobserver.com/2012/02/18/1864251_bottle-ban-helps-boost-recycling.html?rh=1).

- b. A key benefit of mandatory recycling is that it gets the public more engaged in the process.
2. How does the approach impact/complement existing California programs?  
Mandatory recycling complements existing programs by prohibiting recyclable materials from being landfilled. Mandatory recycling should take into account the available recycling infrastructure to ensure the material diverted from the landfill may be appropriately recycled.

The Beverage Container Recycling Program (BCRP) discussed in the Background Paper includes inefficiencies and therefore may not be the best model for increasing the recovery of additional packaging. This is because the BCRP currently requires individual trips to the recycling facility, rather than curbside collection, which may increase GHG emissions and energy use.

3. What are some possible undesirable unintended consequences of the approach and how might these be mitigated?  
A potential unintended consequence is misunderstanding what is and what is not accepted for recycling. To ensure that mandatory recycling programs are implemented effectively, strong education programs for the public on the requirements to recycle certain materials are needed. Currently, different municipalities accept somewhat different materials for recycling, based on municipal capabilities. For instance,
4. What key considerations do you think are missing for each approach?  
Mandatory recycling should be accompanied by robust state and local educational programs to inform citizens about recyclability, recycling and local capability to process materials.

**CalRecycle should consider the following with regard to recycled content requirements:**

1. What would need to happen for the approach to be successful? Who needs to be engaged?
  - a. Recycled content requirements do not necessarily equate to the source reduction of materials or help to keep recyclable materials out of the trash can. Recycled content requirements stipulate that packaging manufacturers must use certain levels of recycled materials, however do not engage the consumer or require action on their behalf. In addition, the demand for many recycled resins currently exceeds the supply, and therefore implementation of recycled content requirements would pull material from existing users of recycled content without adding significant environmental benefit.<sup>24</sup>
  - b. For recycled content requirements to be successful, we would need an excess supply of recyclable materials collected in recycling bins and other programs.
  - c. CalRecycle would need to engage existing users of recycled content plastic, including carpet manufacturers, fleece clothing manufacturers, plastic decking, and many other products. Many such companies operate outside of California, and a program requirement dependent on external actors would be difficult to implement and enforce.

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<sup>24</sup> For example, the supply of recycled polyethylene terephthalate (PET), generated in the U.S. by community programs, lags behind the demand (both current and potential) for the material. For more information, see the National Association for PET Container Resources, "Report on Postconsumer PET Container Recycling Activity in 2013," October 2014, [http://www.napcor.com/pdf/NAPCOR\\_2013RateReport-FINAL.pdf](http://www.napcor.com/pdf/NAPCOR_2013RateReport-FINAL.pdf).

- d. If food contact products are considered for mandatory programs to meet the diversion goal, the Food and Drug Administration (FDA) would need to be involved. The FDA conducts food contact material approvals, including recycled food contact resins.
2. How does the approach impact/complement existing California programs?  
Additional requirements for recycled content, in addition to the recent expansion of the Rigid Plastic Packaging Container Program requirements, would likely create shortages in recycled content availability.
3. What are some possible undesirable unintended consequences of the approach and how might these be mitigated?  
Requiring recycled content for food contact materials would require more water, energy, and GHG emissions to clean the material to meet food grade standards, when strong markets already exist for recycled PET, polyethylene, and polypropylene.
4. What key considerations do you think are missing for each approach?  
Recycled content requirements do not address the goal to recycle more material.

**CalRecycle should consider the following with regard to voluntary initiatives:**

As mentioned above, CalRecycle should join the Wrap Recycling Action Program (WRAP). The WRAP partnership that includes a wide variety of stakeholders, including state government, non-profit organizations, manufacturers and brand owners, demonstrates the education, diversion, and recovery benefits of public-private partnerships.<sup>25</sup>

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<sup>25</sup> For more information on WRAP, see [http://www.plasticfilmrecycling.org/wrap/wrap\\_home.html](http://www.plasticfilmrecycling.org/wrap/wrap_home.html).