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1:30 p.m. – 1021 O Street, Room 2200

## INFORMATIONAL HEARING

### *Extended Producer Responsibility in Action: Policy, Progress, and Pitfalls*

#### SUMMARY

California has implemented nearly a dozen stewardship and Extended Producer Responsibility (EPR) programs over the last decade. As the Legislature contemplates new EPR programs, it can call upon the lessons that have been learned to craft impactful, effective programs. This informational hearing will provide insights on (1) what products are good candidates for EPR programs (2) the pros and cons of establishing measurable goals in legislation, regulations, or stewardship plans, and (3) what tools and mechanisms for evaluation and enforcement have been most successful. By learning from past EPR programs in California, this committee can better assess and improve future EPR legislation.

#### **PART I – When is EPR the right policy choice?**

*EPR: the why and the how of it.* Every consumer product sold in California is produced by a manufacturer and, sooner or later, becomes waste. In 2022, California's overall waste generation from residents and commercial businesses was about 76 million tons. The majority (53%) of this waste goes to landfills. Since 2010, Californians have generated between 1.41 and 1.98 million tons of hazardous waste per year<sup>1</sup>. Managing both hazardous and non-hazardous waste is logistically intensive, expensive, and absolutely essential to protecting the environment from litter and safe-keeping the health of Californians exposed to improperly managed waste or the effects of producing material that quickly becomes waste, like single-use items. Historically, manufacturers took little concern with the end of life of their products; their responsibility ended when the product was in the consumer's hands. EPR programs offer a new paradigm, where producers take a more active role in minimizing their products' contributions to California's landfills.

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<sup>1</sup> Section 2: Generation of Hazardous Waste (ca.gov)

EPR places shared responsibility for end-of-life product management on producers and all entities in the product chain, rather than leaving that responsibility solely to local governments-- and ultimately ratepayers. EPR programs rely on industry stakeholders, often via a product responsibility organization (PRO), to develop and implement approaches to create a circular economy in a stewardship plan, with oversight and enforcement from government agencies. EPR programs have traditionally been used to keep materials that are difficult to manage and that pass through the hands of consumers out of landfills<sup>2</sup>. This can include common household hazardous waste (HHW) or universal waste, like paints and batteries. It can also include high-volume products that are challenging to handle in waste streams and may lead to litter, including items like mattresses, carpets, and packaging.

CalRecycle identifies eight EPR programs that they provide oversight for, including a number of programs that they share oversight responsibilities with DTSC. These include:

- Paint - The Paint Stewardship Program (AB 1343, Huffman, 2010)
- Carpet - The Carpet Stewardship Program ( AB 2398 (Perez), 2010)
- Mattresses - The Mattress Stewardship Program - (SB 254, Hancock, 2013)
- Pharmaceuticals and sharps - The Pharmaceutical and Sharps Waste Stewardship Program (SB 212, Jackson, 2018)
- Packaging and Single Use Plastics - The Plastic Pollution Prevention and Packaging Producer Responsibility Program (SB 54, Allen 2022)
- Batteries - The Responsible Battery Recycling Program (AB 2440, Irwin, 2022)
- Textiles - The Responsible Textile Recovery Act (SB 707, Newman, 2024)

Mercury thermostats are in an EPR program at DTSC, and other products that have been targeted by state-run programs or partial EPR include used oil, bottles, and electronic waste.

While each of these EPR programs differs in significant ways to account for different products and industries covered by the program, each EPR program must consider some of the same foundational questions, starting with the primary question: is this product a good candidate for an EPR program?

*What products are good candidates for EPR?* Strong candidate products for EPR programs are ones that are hazardous or otherwise expensive to manage as waste (such as pharmaceuticals and sharps), and products that could be redesigned with better end-of-life management in mind (such as carpets or packaging)<sup>3,4</sup>

The scope of the covered product is also important to evaluate if it is a good candidate for an EPR. The list of products in a single EPR program should be narrow enough to unite stakeholders linked through the supply and waste management chains and consumer uses, yet broad enough to prevent a shift to problematic replacement products.

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<sup>2</sup> Walls, M. (2003). The role of economics in extended producer responsibility: making policy choices and setting policy goals.

<sup>3</sup> Atasu, A. (2018). Operational Perspectives on Extended Producer Responsibility. *Journal of Industrial Ecology*, 23. <https://doi.org/10.1111/jiec.12816>.

<sup>4</sup> Tojo, N. (2001). Effectiveness of EPR Programme in design change. *Study of the Factors that Affect the Swedish and Japanese EEE and Automobile Manufacturers. IIIIEE Report, 19.*

### ***Questions to consider***

- 1) *Is the scope of existing EPR programs appropriate and future-proof?*
- 2) *How are EPR programs perceived by pollution- or plastics-burdened communities?*
- 3) *How should the Legislature think differently about EPRs for hazardous vs. non-hazardous materials?*
- 4) *What are the roles for DTSC and CalRecycle in administering or overseeing EPR programs based on the products in the program?*

## **PART II – Establishing Measurable Goals: Balancing Certainty, Flexibility, and Timing**

*EPR programs are organized around diverse goals.* EPR programs differ in their objectives—some programs may seek to advance waste reduction, others to keep hazardous material out of landfills, still others can be geared to promote closed-loop recycling. Specific goals to achieve these outcomes can be indirect, such as increasing consumer awareness of the EPR program. Goals can also be directly related to the program objectives, such as establishing set waste reduction, recycling, or minimum post-consumer recycled content goals for products. Some common EPR goals include:

- Establishing a certain number or density of collection or take-back sites
- Setting convenience standards—how easy it is for Californians to access collection.
- Setting recapture rates for covered products
- Achieving recycling rates for products or materials
- Mandating post-consumer recycled content in covered materials
- Requiring source reduction of products or materials
- Educating consumers on the program to improve proper handling and collection
- Training relevant stakeholders on proper product collection or management

Not all of these goals are going to be relevant to every EPR program. For example, the mattress stewardship program and the pharmaceutical EPR program both set goals to establish a certain density of collection sites for their products, but the carpet EPR mandates that carpets have post-consumer recycled content—an objective that is not applicable to pharmaceuticals. Likewise, the Paint EPR program was motivated by the intention of keeping paint out of landfills<sup>5</sup> and did not set recycling goals. Each EPR program demands its own specific menu of goals that advance the objectives of the program.

*Rates and Dates can be set by the Legislature, Agency, or PRO.* EPR legislation not only selects the menu of different goals that the program should steer towards to accomplish its specific objectives, it must also determine whether and how to apply specific “rates and dates” (i.e. mandates) for these goals. These rates and dates can be established in legislation, in regulations by the oversight agency, or in the stewardship plan by the PRO. Most EPR programs include a blend of all three.

With a number of programs operating with quantitative goals in legislation vs. established by agency or the PRO, committee members in today’s hearing may wish to hear different perspectives from the panelists on the trade-offs of establishing measurable criteria in legislation versus delegating goal-setting to agencies or PROs.

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<sup>5</sup> Weiss, J. I. (2019). Extended Producer Responsibility and the Environmental Policy Implementation Process in California: A case study of Paintcare.

*Goals developed by the PRO: flexibility to change products or policy?* Allowing the PRO to set their own targets allows the maximum amount of flexibility for industry to develop innovative solutions and leverages producers' expertise, but doing so runs the risk of biased metrics being used to assess the industry's success.

In evaluating the pros and cons of allowing the PRO to develop its own targets, it may be useful to consider the Paint EPR program. Established in 2010, it is one of California's oldest EPR programs, and unlike most other programs, its legislation did not set specific targets or require oversight agencies to do so. Instead, the PRO defined its own goal in its stewardship plan: ensuring a set percentage of Californians live within 15 miles of a free drop-off site. By this metric, the program has been a notable success (in 2022, the program increased its accessibility target from 90% to 95%). However, nearly half of these drop-off sites are paint retailers, such as Sherwin-Williams, making it unclear whether accessibility improvements result from PRO efforts or fluctuations in local demand for paint stores that participate in the program. It may also be fair to question whether access to paint stores is a truly meaningful metric of success when the initial objective of the program was to keep paint out of landfills. Using consumer access as a proxy for other program goals is not unique to programs with PRO-led targets—in fact, this is a common approach to evaluate programs with consumable products, like paint, pharmaceuticals, and used oil. Consumable products do not lend themselves to easy recycling (recapture) rates, since it is unclear how much of these products is used versus discarded (compare this to non-consumable products, like carpets and mattresses, where the number of products sold should match the number of products recaptured in a perfect EPR program). However, recycling efficiency rates for products once they have been captured in the program can still be evaluated for consumable products, demonstrating whether the program is advancing recycling targets.

How then, did the PRO-led paint program perform in terms of landfill diversion, recycling, and reuse? CalRecycle reports that the program in 2023 has recovered 2,002 tons of paint cans, with 88% of processed paint repurposed through reuse, recycling, or energy recovery<sup>6</sup>. These numbers seem promising—especially relative to other EPR programs. The paint EPR program is often touted as an EPR success story—in part because it has continually put forward stewardship plans approved by CalRecycle and then met the goals of the plan, and in part because it meets its target for consumer accessibility. However, it is worth considering whether the target used to evaluate the program meets the objectives at the level and manner intended by the Legislature: without more clear direction in legislation, it is impossible to be certain.

*Goals developed by the Oversight Agency: an effective use of technical expertise and data?*

Agencies are well-positioned to develop specific EPR goals because they have technical expertise needed to identify what data is needed and to create meaningful metrics for a given objective. But what are the pros and cons of outsourcing the development of mandates to state agencies?

The authorizing legislation for the mattress EPR program back in 2013 tasked CalRecycle with developing recycling targets for mattresses and developing a baseline on which to base those recycling rates. The legislation also gave the department authority to adjust those targets every four years, which enabled CalRecycle to keep pace with changes in the market and ratchet up goals for the program over time.

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<sup>6</sup> Request for Action “Consideration of PaintCare’s Fiscal Year 2023 Annual Report”

Using data from the 2018 mattress EPR program reports, CalRecycle established a baseline for consumer access and identified baselines for mattress recycling and renovation (81%) and for mattress materials recycled and renovated (65%). Establishing such baselines with real-world data provided a critical foundation on which to base realistic targets. While the department chose to increase the target for consumer access, they chose to maintain targets for mattress recycling and efficiency 2021-2024 at baseline levels. CalRecycle again revisited these targets for the 2025-2029 years of program operation. This time, the department increased the targets for consumer access by 1%, the rates for recycling by 2%, (From the 81% baseline to 83%), and the efficiency rate by 3% (from 65% to 68%).<sup>7</sup>

On one hand, this exemplifies the successful process of the oversight agency using data to inform realistic future goals. On the other hand, it is worth considering whether increasing the recycling rate and efficiency rate by 2-3% respectively over the course of a decade (from 2018-2029) meets all of the intended objectives of the mattress EPR program. Seeing these modest increases in targets begs the question if more progress could have been achieved with more ambitious mandates.

*Goals developed by the Legislature: north star or a shot in the dark?* The Legislature does not have the technical expertise or data repository capabilities of the State agency, nor does it know the ins-and-outs of a product in the way that industry does. What then, is the role of the Legislature in setting rates and dates in statute? Even though legislation-set goals run the risk of being too high or too low (both of which can potentially disrupt the program), there are several potential benefits to doing so.

Firstly, establishing goals in legislation may provide more clarity and certainty to the universe of stakeholders impacted by the EPR, including organizations that are not part of the PRO, like waste haulers. The Organization for Economic Co-operation and Development (OECD) underscores that establishing EPR schemes with clear targets is vital for bolstering waste management capacity, as these targets guarantee a steady demand for such services.<sup>8</sup>

Secondly, establishing goals in legislation may act as a “north star” to drive outcomes towards ambitious rates and dates targets. If the Legislature is not clear on its intent, it can lead to unintended policy outcomes: for example, before the Legislature amended the carpet EPR program requirements to include a 24% recycling rate for carpets, one of the primary destinations for carpets in the program was out of state incineration. By not providing clear mandates for recycling initially, the Legislature missed the opportunity to make its intent clear.

However, if legislation establishes metrics to make its objectives clear, it runs the risk of missing the mark--either by establishing mandates that set the bar too low or setting mandates that are so high they could demoralize stakeholders from attempting to progress towards unattainable goals. Absent any mechanisms in the legislation for adjusting these goals, fixing such incidents requires additional legislation to be signed into law.

One important way to avoid the risk of concrete goals becoming a “shot in the dark” is to rely on intensive stakeholder engagement and agency technical expertise during the development of the legislation. Numerous reports on EPR and EPR manuals state that EPR legislation is best

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<sup>7</sup> RFA : Consideration of Proposed State Mattress Recycling Baseline and 2025 to 2029 Goals

<sup>8</sup> OECD (2024), “Extended Producer Responsibility: Basic facts and key principles”, *OECD Environment Policy Papers*, No. 41, OECD Publishing, Paris, <https://doi.org/10.1787/67587b0b-en>.

developed with all key stakeholders at the table<sup>9</sup>. SB 54 may be the best example of this approach. SB 54 was developed over multiple years of engagement with stakeholders from almost every sector impacted by the legislation, and ultimately the bill set specific targets for reducing single-use plastic packaging and foodware by 10% by 2027, 20% by 2030, and 25% by 2032. It also mandates recycling rates of 30% by 2028, 40% by 2030, and 65% by 2032, with all single-use packaging required to be recyclable or compostable by 2032.

In short, there is no one-size-fits-all best option for setting targets. Targets developed by the Legislature are impactful for steering policy, targets developed by the agency are important to provide feasible, data-informed metrics for success, and targets developed by the PRO allow the PRO to create and invest in targets that avoid negatively impacting industry. Legislators can also balance flexibility and certainty by setting long-term goals with interim targets to be refined through regulations, wherein the state agency in conversation with the PRO and using data from required reports establishes a roadmap to legislative mandates. This iterative approach provides a strategic vision while allowing goals to evolve with emerging data and market dynamics.

### ***Questions to Consider***

- 1) *What information is helpful for the Legislature to have before setting quantitative goals in legislation? Where should they turn to get that data?*
- 2) *Should waste characterization studies be used to directly measure the amount of covered products getting into landfills, and would this allow the Legislature or other entities to establish landfill diversion goals?*
- 3) *What is the process of stakeholder engagement as state oversight agencies consider developing metrics or consider ratcheting up goals over time? Has this process worked well, and what are areas for improvement from the stakeholder perspective?*

## **PART III – Evaluation and Enforcement: Braiding Descriptive and Quantitative Data and Multilayer Enforcement**

*What is being evaluated and enforced in an EPR program?* EPR programs impose various requirements on the industry and the PRO, including developing a stewardship plan, submitting annual reports on the plan and budget, and meeting mandated or self-established goals. The oversight agency is responsible for evaluating and enforcing each of these tasks and uses different tools to evaluate and enforce each one.

*Evaluating Evaluation Approaches.* In evaluating progress toward the objectives of the EPR program, are quantitative (numbers) or descriptive (words) data more useful? Oversight agencies evaluate both descriptive and numeric data to assess whether a stewardship plan sufficiently outlines how the PRO will achieve program goals and to track progress toward them. For example, in its 2023 annual report, the Paint EPR PRO reports on its consumer education and outreach efforts, including the quantitative data of distributing, “80,268 brochures, mini cards, fact sheets, posters, and other materials.” It also includes descriptive data, providing examples of its social media ad campaign and describing how the PRO sponsored mural projects using reused paint at the Yolo County HHW facility and the City of Palmdale public works yard.

Efforts like these are important: however, it is difficult to fit them into a specific metric for success. It is not possible to correlate an increase in recycling rates with a specific sponsored mural project, but that does not make the mural project meaningless. This emphasizes the importance of requiring the PRO to describe its broader efforts, rather than restricting the

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<sup>9</sup> The Role of Extended Producer Responsibility Schemes for Packaging towards Circular Economies in APEC

evaluation to purely measurable goals. At the same time, measurable goals do provide a necessary foundation to validate that the program's collective actions are driving progress.

Evaluating quantitative goals with data is more straightforward, but developing accurate formulas for measuring progress can be complex. In the Carpet EPR program, CalRecycle designed an equation to assess the carpet recycling rate. However, the formula failed to account for the lag between carpet sales and carpet end-of-life. Over the last decade, carpet sales declined across the state, shrinking the denominator of the formula and artificially inflating the recycling rate. Or, quantitative data can seem more concrete than descriptive data, but errors in quantitative data analysis can be more difficult to evaluate in real time. Complementing quantitative analysis with qualitative assessments can help provide a more comprehensive evaluation of efforts and progress toward goals.

*Enforcement: Is More Better?* Enforcement can occur at multiple stages in an EPR program, to differing effects. Oversight agencies may take action if a stewardship or budget plan is inadequate, if reporting and budget reporting documents are late or inaccurate, or if PROs fail to meet program goals. To be effective, enforcement must strike a balance and encourage behavioral changes without being needlessly punitive.

CalRecycle, which oversees most EPR programs in California, prioritizes “detering and preventing problems before taking formal enforcement action”<sup>10</sup>. This approach includes working iteratively with PROs to refine stewardship plans. For example, the agency conditionally approved the 2022 amended mattress stewardship plan twice, providing multiple rounds of feedback and allowing the PRO additional time to respond and develop sufficient criteria.<sup>11</sup> Likewise, CalRecycle's compliance-first approach to enforcement is reflected in the agency's investigations on producers to ensure ongoing compliance with state standards. For example, in 2023, CalRecycle conducted 41 inspections for the Carpet program, 96 mattress inspections, 62 inspections for the paint program, and 179 Sharps inspections, and 188 pharmaceutical inspections. Of these inspections, only one, part of the Carpet program, progressed to a penalty stage.<sup>12</sup>

What happens when this compliance-first approach breaks down? The Carpet EPR program provides insights into this question. Beginning in 2016, CARE, the Carpet EPR PRO, failed four consecutive times to produce a stewardship plan that CalRecycle could approve. CalRecycle rejected these plans because CARE failed to provide suitable and quantifiable five-year and annual goals to expand and incentivize markets for post-consumer carpet. In addition, CalRecycle found that CARE did not meet the program requirements in 2013, 2014, 2015, and 2016, despite collecting significant consumer fees.

In response to these continued failures, the Legislature passed multiple reform bills including AB 729 (Chu, Chapter 680, Statutes of 2019) which increased some non-compliance penalties for the program from \$1,000 per day to \$5,000 per day and required the PRO to develop a contingency plan in case it had to operate without an approved plan. In 2017, CalRecycle began an enforcement proceeding against CARE in 2017, and eventually reached a settlement that required CARE to pay \$1.175 million in penalties. This did not, however, solve the bigger problem, as CARE still subsequently failed to be compliant with its 2018-2022 stewardship plan and failed to meet its mandated 24% minimum recycling rate. In this case, increasing penalties

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<sup>10</sup> [CalRecycle Enforcement and Compliance Programs - CalRecycle Home Page](#)

<sup>11</sup> [MRC Plan RFA signed.pdf](#)

<sup>12</sup> [2023 CalRecycle Enforcement Report \(arcgis.com\)](#)

was not sufficient to bring the program into compliance, demonstrating either that the fines were still not severe enough to actuate change, or that different, more creative mechanisms of enforcement were needed.

Last year, the Legislature passed AB 863, which made significant changes to the enforcement of the Carpet EPR program, including increasing civil penalties to \$10,000 - \$25,000 per day, and setting up a three-strike rule for the PRO: if the PRO violates the requirements of the program three times, CalRecycle has the authority to ban it from acting as the PRO.

EPR programs are premised on the ability of industry, through the PRO, to work collaboratively with oversight agencies to develop strategies to meet legislative objectives or mandates. For EPR then, prioritizing a good relationship between the PRO and the oversight agency can be valuable to the smooth functioning of the program. However, lessons learned from prior EPR programs provide important enforcement ‘backstops’ to prevent a PRO from remaining out of compliance. Time will tell if the new and hefty enforcement approaches in the carpet program fix the issue with the Carpet EPR program, but the process has already been informative for further EPR efforts. Newer EPR programs, such as SB 54 (plastics) and AB 2440 (batteries), have incorporated lessons from the CARE case. AB 2440 requires PROs to include contingency plans in case their stewardship plans are disapproved or revoked. SB 54 allows for administrative penalties of up to \$50,000 per day and enables CalRecycle to revoke a PRO’s compliance status if it fails to submit an approvable annual report.

### ***Questions to consider***

- 1) *What options exist for remedying inadequacies in quantitative data or formulae that may be discovered in an EPR program?*
- 2) *Should evaluation criteria be reassessed if programs fail to meet their goals?*
- 3) *Is compliance-first enforcement the most efficient and effective approach? What other approaches do state agencies take in other programs?*
- 4) *Should the severity of penalties reflect the potential danger of the product covered in the program?*
- 5) *Does creating a very severe enforcement penalty support compliance, or does it ever drive a perverse incentive causing oversight agencies to hesitate before using stringent enforcement methods?*