February 18, 2025

Chair Feldman
Education, Energy, and Environment Committee
Maryland State Senate
2 West Miller
Senate Office Building
Annapolis, Maryland 21401

RE: Testimony on SB 901 – Extended Producer Responsibility for Packaging. Position – Favorable With Amendments.

Dear Chair Feldman, Vice Chair Kagan, and Members of the Maryland Education, Energy, and Environment Committee:

Thank you for the opportunity to provide a testimony on SB 901. Just Zero supports the development of a comprehensive Extended Producer Responsibility for packaging program in Maryland. However, we have significant concerns with SB 901 as written. Therefore, we are urging the committee to make strategic amendments to the bill.

Just Zero is a national environmental non-profit advocacy organization that works alongside communities, policy makers, scientists, educators, organizers, and others to implement just and equitable solutions to climate-damaging and toxic production, consumption, and waste disposal practices. We believe that all people deserve Zero Waste solutions with zero climate-damaging emissions and zero toxic exposures.

SB 901 would establish an EPR for packaging program. Currently, five states have adopted this type of policy – California, Colorado, Maine, Minnesota, and Oregon. Just Zero has worked with stakeholders in all these jurisdictions to enact and implement these important programs. When properly designed and implemented, EPR for packaging programs reduce packaging waste, increase recycling rates, and incentivize companies to redesign their products and packaging to be less toxic, and more sustainable. Moreover, as a form of producer responsibility, these programs accomplish this without imposing costs on consumers, local governments, or the state. Rather, the companies whose products generate this waste in the first place provide the funding to administer the program.

EPR for packaging programs can be transformative. However, the details are extremely important. As currently drafted, S.901 has several flaws that will impact the bill's ability to effectively address Maryland's plastic pollution and packaging waste crisis. Therefore, we urge you to make the following changes to the bill:

(1) Add a definition of "recycling" and "responsible end markets" to ensure that so-called "chemical" or "advanced" recycling are excluded from the program. These are dangerous,

ineffective, and toxic ways of dealing with plastic waste that do not result in recycling. These technologies have no place in an EPR for packaging program.

(2) Add language requiring the Maryland Department of the Environment ("Department") to determine which packaging material types are considered recyclable and compostable in Maryland.

(3) Revise the performance standards to make them (a) strictly enforceable, and (b) better aligned with the requirements in the five existing EPR for packaging programs in the U.S.

(4) Amend the fee structure to better reflect Maine and Minnesota's programs. This will result in a fee structure that is clearer. It will also add important eco-modulation factors to incentivize producers to redesign products and packaging to be more environmentally friendly.

(5) Remove "traditional beverage containers" from the definition of "packaging material." Aluminum cans, plastic bottles, and glass bottles are better managed under a Bottle Bill. An EPR for packaging program should only cover "non-traditional beverage containers" such as cartons, pouches, and aseptic containers which are not recyclable. To effectuate this, the committee should make this amendment and also support the adoption of SB 346/HB 232.

Several of the amendments we are proposing will align Maryland's program with the five existing U.S. programs. To support our testimony, we have included **Attachment A**. Attachment A summarizes the key components of all five EPR for packaging programs in the U.S.

I. Overview of the Need for a Strong EPR for Packaging Program.

The way we think about and manage waste in this country is flawed, inherently unsustainable, and deeply unjust. Unfortunately, this isn't surprising given that the companies that design, package, and market fast moving consumer goods are completely detached from the end-of-life management of these materials. Instead, residents, towns, and counties are stuck paying to collect and manage a waste stream they have little-to-no control over. Even worse, because these companies have no responsibility for the waste associated with their products and packaging, they are increasingly overpackaging products and using unrecyclable materials like plastic. This imposes a significant burden on New Jersey and its residents.

Approximately 40% of all plastic produced each year is used for packaging.[1] Virtually none of this material is recyclable. In 2021, only 5% of all plastic waste generated by U.S. households was recycled.[2] This is unlikely to change, even with producer funded recycling systems, because most of this plastic isn't technically or economically capable of being recycled. In fact, a recent report from Greenpeace which surveyed 370 material recovery facilities in the United States found that only PET #1 and HDPE #2 currently meet federal guidelines for recyclability.[3]

[1] Laura Parker, *Fast Facts About Plastic Pollution*, National Geographic. (Dec. 20, 2018).
[2] Greenpeace, *Circular Claims Fall Flat Again*, p. 3. (Oct. 24, 2022).
[3] *Id.*

Therefore, all other forms of plastic do not even meet our weak federal requirements for recyclability, which primarily just focus on access to services.[4]

Plastic recycling is, and will continue to be, extremely limited. Unlike glass and aluminum, plastic can only be recycled a certain number of times before it becomes too degraded to be turned into new products.[5] At some point, even the small amount of plastic that is actually recyclable will need to be burned or buried.

A strong EPR for Packaging Program can fix Maryland's broken and disjointed approach to managing packaging waste by creating a more efficient, fair, and sustainable system funded by the companies responsible for all this waste in the first place. Under these programs, companies that market, sell, and distribute products using single-use packaging are required to fund and develop programs and infrastructure necessary to increase, the collection, recycling, and reuse of packaging waste.

This type of program will drastically reduce the cost cities and towns across Maryland are paying to collect, haul, and manage all this single-use packaging waste. Additionally, modern EPR for packaging programs often include reduction and recycling requirements which force companies to significantly cut down on the single-use packaging waste associated with their products while also increasing the recyclability of the packaging that remains. These requirements are necessary to hold companies accountable to do more than simply pay to fund recycling.

II. The Committee Should Make Target Amendment to SB 901 to Ensure the Program Will Sufficiently Address Maryland's Plastic Pollution and Packaging Waste Crisis.

A. Add Definitions Which Exclude So-Called "Chemical" or "Advanced" Recycling.

To ensure that packaging materials are responsibly managed, Maryland's program must exclude so-called "advanced" or chemical" recycling.

Advanced recycling – sometimes called chemical recycling or molecular recycling – refers to an array of technologies that use heat and/or solvents to break down plastics into monomers (the building blocks of plastic), hydrocarbons, fuels, chemicals, and waste byproducts. These technologies include gasification, pyrolysis, depolymerization, solvolysis, methanolysis, and hydrolysis.[6]

[4] *See,* 16 C.F.R. §260.12 The Federal Trade Commission's Guides for the Use of Environmental Marketing Claim, commonly known as the "Green Guides" states that a company can only make unqualified claims about the recyclability of a product or packaging if recycling facilities that can manage the product or packaging are available to at least 60% of consumers. Importantly, the federal requirements do not look into whether the materials sent to these recycling facilities are actually used to make new consumer products.
[5] Matt Simon, *Plastic Recycling is Far Worse Than We Thought*, Mother Jones (May 29, 2023).
[6] Andrew Rollinson & Jumoke Oladejo, Chemical Recycling: Status, Sustainability, and Environmental Impacts, Global Alliance for Incinerator Alternatives 7–12 (2020).

According to proponents like the American Chemistry Council, these processes create materials which are used to manufacture new plastic products.[7] The reality of advanced recycling, however, dramatically contrasts with these statements. In practice, advanced recycling means generating pollution, and burning plastic derived fuels and toxic chemicals.[8] The process results in plastics being boiled down into gases, chemicals, tars, oils, and toxic waste byproducts, which are subsequently burned.[9] Little to no new plastics are manufactured.[10] In fact, all of the advanced recycling facilities operating at a commercial scale in the U.S. are using pyrolysis to create and burn plastic derived fuel.[11] Converting plastic into fuels is not considered recycling by national and international standards.[12]

While proponents argue that ***some*** of the plastic processed at advanced recycling facilities is used to manufacture new plastic products, this is extremely misleading. A report from the Department of Energy found that plastic processed through advanced recycling technologies – specifically pyrolysis and gasification – were rarely used manufacture new plastic products.[13] In fact, only 1 – 14% of the plastic processed at advanced recycling facilities were retained and used to manufacture new plastics.[14] A recent in-dept analysis from ProPublica found that the maximum amount of feedstock produced through pyrolysis that can be used to manufacture new plastic products is 20%.[15] This means if a pyrolysis operator started with 100 pounds of plastic waste, it can expect to end up with 15-20 pounds of reusable plastic.[16] Importantly, this 20% is only achievable under ideal conditions. In general, the process yield significantly lower outputs due to contamination in post-consumer plastics.[17]

In addition to resulting in virtually no recycling, the Department of Energy report also found that these technologies had significant economic and environmental impacts.[18] The study found that the environmental and economic impacts of pyrolysis and gasification are 10 to 100 times worse than using virgin plastics.[19] Additionally, the fuel derived from plastic pyrolysis is extremely toxic. Reports from the U.S. Environmental Protection Agency have found that production of these fuels can emit air pollution that is to toxic, 1 out of 4 people exposed to it over a lifetime could develop cancer.[20]

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[7] American Chemistry Council, What is Advanced Recycling.
[8] NRDC, Recycling Lies: "Chemical Recycling" of Plastics Is Just Greenwashing Incineration (2022).
[9] Dr. Veena Singla, Recycling Lies: Chemical Recycling of Plastic is Just Greenwashing Incineration, Natural Resources Defense Council, p. 2. (2022).
[10] *Id.* at 3.
[11] *Id.*
[12] See EPA's 1997 Measuring Recycling: A Guide for State and Local Governments and European Union, Directive of the European Parliament on Waste and Repealing Certain Directives, Pub. L. No. Article 3(17).
[13] Taylor Uekert, et al, Technical, Economic, and Environmental Comparison of Closed-Loop Recycling Technologies for Common Plastics, Department of Energy, ACS Sustainable Chem. Eng. 2023, 11, 3, 965–978.
[14] *Id.*
[15] Lisa Song, Selling a Mirage: The Delusion of "Advanced Plastic Recycling, ProPublica. (June 20, 2024).
[16] *Id.*
[17] *Id.*
[18] Taylor Uekert, et al, Technical, Economic, and Environmental Comparison of Closed-Loop Recycling Technologies for Common Plastics, Department of Energy, ACS Sustainable Chem. Eng. 2023, 11, 3, 965–978.
[19] *Id.*
[20] Sharon Lerner, This "Climate-Friendly" Fuel Comes With an Astronomical Cancer Risk, ProPublica. (Feb. 23, 2023).

To prevent companies from utilizing this deceptive, polluting, and dangerous form of solid waste management as part of the EPR for Packaging Program, we strongly urge you to amend the definition of recycling and environmentally sound management practices to explicitly exclude so-called chemical recycling process.

- "Environmentally sound management practices" means policies or procedures for the collection, storage, transportation, reuse, and recycling or disposal of discarded packaging products, which policies or procedures are established by the department and implemented by a producer or a group of producers to: ensure compliance with all applicable federal, State, and local laws, rules, regulations, and ordinances; protect human health and the environment; and address matters including, but not limited to, adequate recordkeeping and accurate tracking and documentation of the collection, transportation, reuse, and recycling or disposal of discarded packaging products within the State. “Environmentally sound management practices” do not include processes that are inconsistent with applicable laws and conventions or fail to adequately safeguard the environment and human health.

- "Recycling" means to separate, dismantle or process the materials, components or commodities contained in discards for the purpose of preparing the materials, components, or commodities for use or reuse in new products or components. "Recycling" does not include: (a) energy recovery or energy generation by any means, including but not limited to, combustion, incineration, pyrolysis, gasification, solvolysis, or waste-to-fuel; (b) any chemical conversion process; or (c) landfill disposal.

B. <u>Add A Process Empowering the Department to Determine Which Packaging Material Types are Considered Recyclable and Compostable.</u>

Currently, SB 901 does not include language establishing a process for periodically reviewing and determining what packaging material types are recyclable or compostable in Maryland. This is a significant oversight that the committee must address.

Determining what packaging material types are recyclable and compostable in Maryland is critical to operating a successful EPR for packaging program. Without a this process you cannot develop a producer fee structure that encourages producers to utilize recyclable and compostable packaging, a metric for measuring compliance with the recyclability and compostability goals, a producer plan that will ensure investments in collection, processing, and end-markets that increase recycling and composting rates, and standardize recycling and composting instructions across the state.

Every EPR for packaging program in the U.S. establishes a process for determining – and periodically updating – a list of the packaging material types that are recyclable or compostable. Moreover, given the importance of this determination, four of the five existing programs empower the state environmental agency, not the Producer Responsibility Organization to make this determination. Table 1 in Attachment A explains how each of the existing programs handles the determination process.

C. The Committee Should Expand and Strengthen Performance Goals.

Performance goals are one of the most important components in an EPR for packaging program. These goals measure whether the program is operating successfully. Therefore, it is important to ensure the goals are both strong and enforceable. As currently drafted, SB 901 fails on both accounts.

SB 901 requires the Producer Responsibility Organization – through the Producer Responsibility Plan process – to establish performance goals for each packaging material type.[21] At a minimum, these performance goals must include: (1) post-consumer recycled content goals, (2) recyclability and recycling rate goals, (3) packaging reduction goals, (4) compost access or compost rate goals, (5) contamination reduction goals, (6) greenhouse gas reduction goals, and (7) any other goals that reduce packaging material waste and are justified in the plan.[22]

We believe that performance goals should be either set in statute or developed by the Department through rulemaking. This will better align Maryland's program with the five existing U.S. programs. California and Oregon both set clear performance goals in statute. Maine and Minnesota empower the state environmental agencies to set performance standards through rulemaking.

Regardless of how the performance goals are set, SB 901 must include stronger penalties if the goals are not met. Without sufficient enforcement, the goals are nothing more than aspirational guideposts. Given the scope and severity of the plastic and packaging waste crisis, failure to meet the goals must result in mandatory penalties. These penalties should result in increased producer fees as well as corrective action to get the program back on track. We recommend ensuring that any monetary penalties be earmarked for system improvements that will specifically address the goals that we're unmet.

The following tables in Attachment A will provide key information regarding how each of the existing EPR for packaging programs in the U.S. address performance standards.

- Table 2: Provides an overview of the performance standards the Maine Department of Environmental Protection and the Minnesota Pollution Control Agency is required to develop through rulemaking.
- Table 3: Provides an overview of the performance standards the Maine Department of Environmental Protection developed through rulemaking. Maine finalized these rules in December 2024.
- Table 4: Provides an overview of how each program addresses waste reduction.
- Table 5: Provides an overview of the recycling goals for each program.

D. The Committee Should Revise the Fee Structure to be Clearer and Better Incentivize Product Redesign.

Currently, the bill requires the Producer Responsibility Organization to develop a producer fee structure. This structure will be used to determine the fees each participating producer must

[21] SB 901, §9-2505(c)(3).
[22] *Id.*

contribute. Under the bill, the fee structure must be variable based on the costs associated with transporting, collecting, and processing packaging materials.[23] Additionally, the fees must be eco-modulated to incentivize recyclability and recycled content.[24] While we support the intention behind the fee structure, we believe that the goals would be better achieved with clearer language.

We recommend adopting a fee structure similar to Maine and Minnesota.[25] This would require the fee structure:

(1) Vary based on the total amount of covered materials each producer introduces into the state the prior calendar year on a per unit basis, such as per ton, per item, or other united of measurement;
(2) Reflect the program costs for each covered material type including the costs associated with transporting, collecting, and processing the material type;
(3) Reflect whether the material type is recyclable and/or compostable; and
(4) Be eco-modulated to:
    a. Eliminate intentionally added toxic substances in covered materials;
    b. Reduce the amount of packaging per individual covered material that is necessary to efficiently deliver a product without damage or spoilage without reducing its ability to be recycled or composted;
    c. Increase the amount of covered materials managed in reuse systems;
    d. Increase the proportion of postconsumer recycled content in covered materials;
    e. Enhance the recyclability or compostability of covered materials;
    f. Discourage using materials and design attributes whose environmental impacts and human health impacts can be reduced.

This structure sets clear parameters on how recyclability and compostability influence the fee structure. It also sets robust eco-modulation factors to incentivize positive environmental outcomes. These eco-modulation factors are similar to those established in the existing U.S. programs. Importantly, eco-modulation includes toxicity. This is necessary to encourage companies to phase out the use of toxic chemicals in packaging. Currently, SB 901 does not address toxics at all. Maine, Minnesota, and California all use the fee structure to address toxic chemicals in packaging.

Table 6 in Attachment A provides an overview of how the five existing programs handle the fee structure and eco-modulation.

E. <u>Remove the "Traditional Beverage Containers" from the Definition of "Packaging Materials."</u>

Finally, we urge the committee to amend the definition of "packaging materials" to exclude "traditional beverage containers." Traditional beverage containers include aluminum cans, glass bottles, and plastic bottles. These containers are better managed under a separate producer

[23] SB 901, §9-2505(e)(II).
[24] *Id.*
[25] See, M.R.S.A., § 2146(6) for Maine's fee structure. See, Minnesota Packaging Waste and Cost Reduction Act, Section 13 [115A.1454].

responsibility program called a Bottle Bill. The Maryland Legislature is currently considered bills that would establish a Bottle Bill.[26] Under our recommended approach, non-traditional containers such as cartons, aseptic containers, and pouches will be covered under the EPR for packaging program because they are not readily recyclable.

Bottle Bills are significantly more effective at managing traditional beverage containers. Evidence from around the world demonstrates that these programs reduce litter, increase recycling rates, create jobs, and develop the consumer culture and infrastructure necessary for reusable beverage systems.[27] Maryland should double-down on its efforts to reduce waste and increase recycling by passing both a Bottle Bill and EPR for packaging program. These separate programs will complement each other.

Forgoing the development of a Bottle Bill program in favor of an EPR for packaging program – even if it includes beverage containers – because that will result in several negative consequences, such as:

(1) **Elimination of litter reduction benefits associated with Bottle Bills:** When beverage containers are part of an EPR for Packaging Program, you do not get the refundable deposit on each container. As a result, consumers do not have an economic incentive to hold on to their containers for recycling. This means the containers are likely to continue to get littered and discarded, rather than recycled.

(2) **Lowered quality of recycled material from beverage containers**: The containers that are currently captured through Maryland's recycling system are commingled with other recyclables. This commingling increases contamination, lowering the quality and value of the containers making it harder to recycle them. This is true even when the system is enhanced through an EPR for Packaging Program. A Bottle Bill will remove these containers by processing them through a separate recycling system which maximizes value and recyclability.

(3) **Lowered recycling rates for all packaging materials:** One of the key goals of an EPR for packaging program is to develop new ways to collect and manage hard to recycle materials. If a state does not have a Bottle Bill, EPR programs must divert precious resources to manage beverage containers rather than focusing on addressing other, more problematic packaging. There is already evidence of the higher recycling rates for packaging achieved through enacting a Bottle Bill.[28] States with Bottle Bill recycle 34% of packaging, compared to 7% in non-Bottle Bill states.[29]

III. Conclusion

Maryland must act to reduce plastic, improve recycling, and hold corporations accountable for the waste they create. An amended version of SB 901 can develop a program that will fix Maryland's broken and disjointed approach to managing packaging waste. This legislation can

[26] *See*, SB 346, 2025 Leg., 447th Sess. (Md. 2025), and HB 232, 2025 Leg., 447th Sess. (Md. 2025).
[27] Kevin Budris, How the Best Bottle Bills Make a Real Impact, Just Zero. (Mar. 30, 2023)
[28] Eunomia, The 50 States of Recycling: A State-by-State Assessment of US Packaging Recycling Rates, 6. (Dec. 2023).
[29] *Id.*

be a key step in the process of creating a fairer, more sustainable model that is paid for by the responsible parties, not Maryland residents.

Thank you for your time and consideration of this testimony. We look forward to continuing to work with you on the development of this program.

Respectfully submitted,

Peter Blair, Esq.
Policy + Advocacy Director
Just Zero

ATTACHMENT A:
Summary of EPR Performance Goals in the U.S.

Overview
This attachment is intended to provide a summary of the key components in the five existing EPR for packaging programs in the U.S.

- Table 1: Overview of the process for determining which packaging material types are considered recyclable and/or compostable in each program.
- Table 2: Provides an overview of the performance standards the Maine Department of Environmental Protection and the Minnesota Pollution Control Agency is required to develop through rulemaking.
- Table 3: Provides an overview of the performance standards the Maine Department of Environmental Protection developed through rulemaking. Maine finalized these rules in December 2024.
- Table 4: Provides an overview of how each program addresses waste reduction.
- Table 5: Provides an overview of the recycling goals for each program.
- Table 6: Provides an overview of the eco-modulated fee structure for each program.

TABLE 1: Determination of Recyclability and Compostability in U.S. EPR for Packaging Laws

State	Who Makes the Determination?	Summary
California.[30]	The Department.	CalRecycle is required to publish a list of covered material categories that are recyclable or compostable.
Colorado.[31]	The Producer Responsibility Organization	The PRO is responsible for developing a list of recyclable materials. The Colorado Department of Public Health and Environment must approve the list.
Maine.[32]	The Department.	The Department of Environmental Protection is responsible for determining what materials are recyclable. Criteria for recyclability is established through rulemaking.
Minnesota.[33]	The Department.	The Minnesota Pollution Control Agency is responsible for determining what materials are considered recyclable or compostable by 2028.
Oregon.[34]	The Department.	The Oregon Department of Environmental Quality is responsible for developing two material lists: • Materials that are recyclable through curbside recyclable programs; and • Materials that are recyclable through programs established by the PRO.

[30] California Public Resource Code, §42061.
[31] Colorado Producer Responsibility Program for Statewide Recycling Act, Section 25-17-706 (1)(a).
[32] M.R.S.A., Section 2146(13)(a).
[33] Minnesota Packaging Waste and Cost Reduction Act, Section 13 [115A.1453]
[34] Oregon Plastic Pollution and Recycling Modernization Act, Section 22(4).

Table 2: Performance Goals Maine and Minnesota's Programs will Establish Through Rulemaking.	
Maine	In Maine, the Department of Environmental Protection is responsible for setting performance goals related to: (1) packaging waste reduction, (2) packaging reuse, (3) post-consumer recycled content, (4) litter reduction, (5) recycling access and collection, (6) overall recycling rates, and (7) material-specific recycling rates.[35] These performance goals we're adopted by the Board of Environmental Protection in December, 2024.
Minnesota	In Minnesota, the Minnesota Pollution Control Agency is responsible for setting statewide requirements related to: (1) recycling rates, (2) composting rates, (3) reuse rates, (4) return rates, (5) waste reduction, (6) post-consumer recycled content.[36] These performance goals have not been developed yet.

Table 3: Maine's Program Goals[37]	
Recycling Access	This goal measures the percent of Maine residents with access to municipal recycling of readily recyclable packaging material. The percent should be no less than 70%, as measured by the second needs assessment, no less than 90%, as measured by the third needs assessments, and no less than 100% by the fourth needs assessment..
Participation	This goal measures the percent of cities, towns, townships, villages, and plantations, in each group of similar municipalities, as specified in Section 15, that are participating in the program. The percent should be no less than 60% from 2030 to 2034, no less than 75% from 2035 to 2039, and 100% from 2040 onward
Collection	This goal measures the percent of readily recyclable packaging material in the disposal stream. It is measured once every 10 years as the weight of readily recyclable packaging material in one ton of the disposal stream (as identified during disposal audits) multiplied by the total tons disposed in the State (as most recently reported by the Department in accordance with 38 M.R.S. § 2124-A) divided by the tons of readily recyclable packaging material produced, according to the most recent producer reporting. The percent should be no more than 40% from 2030 to 2034, no more than 30% from 2035 to 2039, and no more than 20% from 2040 onward. -
Reduction	This goal measures the total weight of packaging material reported by producers, collectively, per capita, relative to the fifth reporting year. The total weight should be reduced by no less than 40% from 2040 to 2049 and no less than 60% from 2050 onward.
Reuse	This goal measures the percent by weight of total packaging material reported by producers that is managed for reuse by participating municipalities or through alternative collection programs. The percent should be no less than 15% from 2030 to 2039, no less than 30% from 2040 to 2049, and no less than 50% from 2050 onward.

[35] 38 M.R.S.A., § 2146(13)(A)(5).
[36] See, Minnesota Packaging Waste and Cost Reduction Act, Section 13, Subsection 7. [115A.1454].
[37] See, 06-096 CMR Ch. 428 §(3)(A).

Readily Recyclable, Reuseable, or Compostable	This goal measures the percent of packaging material that is readily recyclable, reusable, or compostable. The percent should be no less than 50% from 2030 to 2039, no less than 75% from 2040 to 2049, and 100% from 2050 onward.
Base Material Specific Recycling Rate	This goal measures the percent of packaging material expected to be managed by participating municipalities that is managed for recycling, by base material. The percent should be no less than 60% from 2030 to 2034, no less than 65% from 2035 to 2039, no less than 70% from 2040 to 2044, and no less than 75% from 2045 onward.
Overall Recycling Rate	This goal measures the percent of packaging material expected to be managed by participating municipalities that is managed for recycling. This percent should be no less than 60% from 2030 to 2034, no less than 65% from 2035 to 2039, no less than 70% from 2040 to 2044, and no less than 75% from 2045 onward.
Post-Consumer Recycled Content	This goal measures the percent of the total weight of packaging material eligible for a post-consumer recycled material incentive fee that is post-consumer recycled material, by base material, according to the most recent producer reporting. This percent should be no less than 10% from 2030 to 2039, no less than 20% from 2040 to 2049, and no less than 30% from 2050 onward
Litter	This goal measures the percent of litter that is packaging material, as measured in items. The percent should be less than 80% of cumulative litter collected as determined by litter audits from the effective date of this rule to 2029, less than 50% of cumulative litter collected during litter audits from 2030 to 2039, and less than 30% of cumulative litter collected during litter audits from 2040 to 2049. From 2050 onward, the percent of litter that is packaging material in each litter audit conducted should be less than 15%.

Table 4: State-By State Reduction Requirements / Goals	
California[38]	Just for plastic packaging: - 25% by weight and 25% by plastic component by 2032 *10% of this must be met through elimination/switching to reusable/refillable.
Colorado	No reduction requirements. Only attempts to incentivize producers to reduce packaging through eco-modulation of producer fees.
Maine[39]	Applies to all covered packaging material types. Department set program goals through rulemaking. Under the rules the total weight of packaging reported by producers must be reduced: - 15% by 2030 - 30% by 2040 - 50% by 2050
Minnesota[40]	Department required to establish statewide requirement through rulemaking. PRO incorporates this as performance targets in the plan subject to public comment and commissioner approval. Awaiting rules.
Oregon[41]	No reduction requirements. PRO is responsible for providing waste prevention and reuse grants that *must* be used for waste reduction (not waste recovery/recycling).

[38] See, Cal. Env. Code §42057(a).
[39] See, 06-096 CMR Ch. 428 §(3)(A)(3).
[40] See, Minnesota Packaging Waste and Cost Reduction Act, Section 13, Subsection 7. [115A.1454].
[41] See, ORS 459A.926 §32

Table 5: State-by-State Recycling Requirements	
California	Percentage of covered material that must be recyclable or compostable: - 100% by 2032.[42] Plastic packaging recycling rates: - 30% by 2028 - 40% by 2030 - 65% by 2032.[43] Expanded polystyrene food service ware cannot be sold unless it meets the following recycling rates: - 25% by 2025 - 30% by 2028 - 50% by 2030 - 65% by 2032.[44]
Colorado[45]	Targets set by PRO. Failure to meet does not result in penalties. After the needs assessment PRO selected: (1) 40% by 2030, and (2) 50% by 2035
Maine	Department required to set program goals through rulemaking. Under rules: Percent of packaging that is readily recyclable, reusable or compostable: - 50% by 2030 - 75% by 2040 - 100% by 2050.[46] Percent of packaging material that is recycled annually: - 60% by 2030 - 65% by 2035 - 70% by 2040 - 75% by 2045.[47]
Minnesota[48]	Department is required to establish statewide requirements. PRO incorporates this as performance targets in the plan subject to public comment and commissioner approval. Awaiting rules
Oregon[49]	Targets just for plastic packaging and plastic food service ware: - 25% by 2028 - 50% by 2040 (by 2038 this goal can be adjusted) - 75% by 2050

[42] See, Cal. Env. Code §42050(b).
[43] See, Cal. Env. Code §42050(c).
[44] See, Cal. Env. Code §42057(i).
[45] Maria Rachal, Colorado Legislature Greenlights "Medium" Scenario for EPR Implementation, Packaging Dive. (April 22, 2024).
[46] See, 06-096 CMR Ch. 428 §(3)(A)(5).
[47] See, 06-096 CMR Ch. 428 §(3)(A)(6).
[48] See, Minnesota Packaging Waste and Cost Reduction Act, Section 13, Subsection 7. [115A.1454].
[49] See, ORS 459A.926 §27(2)(a)(A)-(C).

Table 6: Fee Structure + Eco-Modulation Requirements		
State	**Who Sets the Fee**	**Eco-Modulation Factors.**
California[50]	PRO subject to approval by Department.	Fees are eco-modulated to incentivize: (1) increased recycled content, (2) source reduction, (3) standardization of packaging to increase reuse, recycling, and composting, (4) reduction in toxics, (5) improved labeling, and (6) reuse + refill.
Colorado[51]	PRO subject to approval by Department.	The fees must be eco-modulated to incentivize: (1) reduction, (2) innovation and practices to enhance recyclability and commodity value, (3) post-consumer recycled content, and (4) designed for reuse/refill. The fees must also be eco-modulated to disincentivize: (1) practices that increase costs of reuse, recycling, and composting, (2) design that disrupts recycling of other materials, and (3) producers from using materials not on the minimum recyclable list.
Maine[52]	Department	The fees are eco-modulated to incentivize: (1) post-consumer recycled content, (2) increased recyclability, (3) reduced toxicity, (4) reduction, (5) litter reduction, (6) increased reusability, and (7) reduced confusion surrounding labeling.
Minnesota[53]	PRO subject to approval by Department.	The fees shall be eco-modulated to incentivize: (1) minimization of environmental and human health impacts, (2) elimination of toxics, (3) reduction in packaging, (4) increased reuse + refill, and (5) increased recyclability and compostability.
Oregon[54]	PRO subject to approval by Department.	The fees are eco-modulated to account for: (1) post-consumer content of the material, (2) product to package ratio, (3) producer's choice of material, (4) life-cycle of environmental impacts, and (4) recycling rate of the material. Dept. is responsible for establishing a contamination management fee and commingled recycling processing fee which are paid by PRO.

[50] See, Cal. Env. Code §42053(e).
[51] CO Rev Stat § 25-17-705(4)(i)(IV).
[52] 38 M.R.S.A., § 2146(13)(A)(1)(c).
[53] See, Minnesota Packaging Waste and Cost Reduction Act, Section 14, Subsection 3. [115A.1454].
[54] See, ORS 459A.926 §11(4).