U.S. PLASTICS PACT™

Extended Producer Responsibility Policy Position Paper

A framework for designing effective legislation for packaging in the United States

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EXECUTIVE SUMMARY

The U.S. Plastics Pact (USPP) Extended Producer Responsibility (EPR) position offers a framework for designing effective EPR legislation for packaging in the United States. Developed through consensus among stakeholders across the plastic packaging value chain, this document outlines six priority levers essential to advancing packaging circularity: Funding Model, Funding System Design, Fee Setting & Eco-Modulation, Performance Targets, Responsible End Markets, and Covered Materials.

This document serves as a practical guide for policymakers, regulators, and stakeholders to craft EPR laws that are equitable, effective, and adaptable...

The framework emphasizes the importance of harmonization across states on core EPR elements, such as scope, definitions, and performance metrics, to reduce administrative burdens and accelerate progress toward a circular economy. It also highlights the need for flexibility in certain areas to reflect state-specific contexts, while advocating consistency in others to incentivize sustainable packaging design.

Some key principles include aligning performance targets with USPP's Roadmap 2.0, prioritizing domestic recycling infrastructure, and establishing clear definitions and guardrails for responsible end markets and postconsumer recycled content (PCR). This document serves as a practical guide for policymakers, regulators, and stakeholders to craft EPR laws that are equitable, effective, and adaptable to evolving industry needs.

Disclaimer

This paper does not contain any endorsements nor legal or financial advice and should not be construed as such. The U.S. Plastics Pact and contributing authors are not liable for any business decisions that result from consulting this document. This document reflects a collective consensus but should not be interpreted as complete alignment with, or endorsement of, every point by each USPP member.

INTRODUCTION & APPROACH

The U.S. Plastics Pact Extended Producer Responsibility Policy Position serves as a clear reference guide for developing strong EPR policy for packaging in the United States. It reflects consensus across the plastic packaging value chain and provides a practical framework for crafting legislation that advances circularity while remaining implementable.

This position is organized around six priority levers—Funding Model, Funding System Design, Fee Setting & Eco-Modulation, Performance Targets, Responsible End Markets, and Covered Materials—identified as critical to effective EPR programs. While harmonization of core elements such as definitions, scope, and performance metrics is essential to reduce complexity and administrative burden, flexibility is equally important to accommodate state-specific realities such as infrastructure, data availability, and market conditions.

Approach

Rather than prescribing overly complex requirements at the outset, this framework prioritizes starting with achievable measures and scaling ambition over time. Key principles include:

- **Start Practical, Scale Ambition:** Begin with core requirements that can be implemented effectively, embedding mechanisms for periodic review and adjustment.
- **Balance Harmonization and Flexibility:** Advocate for harmonized foundational elements while allowing states to tailor operational details like funding models and fee structures.

This staged, adaptive approach ensures EPR programs are actionable and resilient...

- **Focus on Key Success Measures:** Emphasize transparency, equity, and alignment with circularity goals, supported by robust reporting and verification systems.
- **Clarify EPR System Boundaries and Complementary Policy Needs:** EPR primarily addresses supply-side challenges, such as collection and recycling infrastructure. However, its success depends on strong demand for postconsumer recycled content (PCR). A system striving for circularity must account for this and support complementary policies to ensure stable PCR markets.
- **Enable Innovation and Continuous Improvement:** Encourage infrastructure and technology innovation while maintaining guardrails to ensure environmental integrity and accountability.

This staged, adaptive approach ensures EPR programs are actionable and resilient—capable of delivering near-term progress while evolving to meet long-term circularity objectives.

LEVER 1: FUNDING MODEL

The intent of EPR policy is to shift financial and operational responsibility from taxpayers and local governments to producers and minimize responsible end-of-life costs for consumers. The funding model is a critical component of any EPR program, shaping how producers finance operations and influencing the program's stability, fairness, adaptability and effectiveness. It determines how costs are shared among obligated parties and aligned with program goals, i.e. who pays for the EPR program.

A range of funding models exist across current EPR programs, including full responsibility by the Producer Responsibility Organization (PRO) and shared responsibility models between producers and municipalities.

The U.S. Plastics Pact recommends that funding models—and the allocation of financial responsibility among stakeholders—are clearly defined in legislation and tailored to the unique needs of each state. Harmonizing funding models is not practical across all states. The optimal model for each state depends on state factors including but not limited to: existing infrastructure and associated costs; data availability and baseline metrics; geographic and demographic realities; political landscape and policy goals; existing legislation; and market and end-market conditions.

States where key data (e.g., recycling rates, system costs) is lacking may benefit from Needs Assessments to inform the initial funding model and future adjustments; however, this should not delay critical legislative action. In some states, sufficient precedent, industry reporting, and municipal recycling data already exist to define core program parameters and obligations. Legislation can establish the program's authority and the type of funding model, while delegating responsibility for detailed rulemaking and data-driven refinement to the post-enactment regulatory phase.

LEVER 2: FUNDING SYSTEM DESIGN

While who pays for the system is addressed in the preceding lever, which costs (ranging from collection and processing to education, infrastructure, and oversight) are covered by the EPR program falls under Funding System Design. Clear and comprehensive cost definitions are essential to achieving recovery and performance goals while ensuring transparency and accountability in fee allocation.

To support consistent and effective materials recovery, the U.S. Plastics Pact advocates for harmonization of system components funded across states, achieved through legislation or regulation.

All state EPR funding should include the following core components:

- **System Operations:** Costs for recycling, reuse, composting, and contamination management, including but not limited to future collection, processing, transport, and sorting, while ensuring worker safety and living wages
- **Infrastructure:** Operation, maintenance, innovation and expansion, including consideration of equitable accessibility standards

Clear and comprehensive cost definitions are essential to achieving recovery and performance goals...

- **Data & Reporting:** Mandated data collection and reporting across all entities involved in relevant program activities (e.g., collection volumes, MRF, bale yields, and waste stream audits)
- **Education & Outreach:** Public-facing communication and behavior change programs for proper recycling, reusing, composting, or disposing of packaging and printed paper
- **Administration:**
  - PRO staffing and operational costs
  - State oversight and enforcement costs
- **Incentive Structures:** Design of eco-modulation fee structure
- **End-market development and management:** Costs to support viable, wide-scale solutions that enable materials on the Additional Materials List to transition to the Minimum Recyclables List, expanding the range of packaging types that can be effectively and economically recycled.

In the above core components, improvements for underserved communities should be considered where applicable.

LEVER 3: FEE SETTING & ECO-MODULATION

Fee setting occurs for all covered materials under EPR. The PRO will set base fees based on the covered material volume that is sold in the state, along with factors such as cost to collect material, its value after being recycled, and existing infrastructure to recycle the material. Different materials thus have different base fees, and these fees may change based on the above factors. Fees should cover the net cost of the corresponding material and not subsidize other materials.

Eco-modulated fees are a key mechanism within Extended Producer Responsibility (EPR) programs, incentivizing producers to adopt circular packaging practices—such as circular design or inclusion of PCR—to reduce the overall long-term costs of the system. Legislation should require the use of eco-modulated fees and bonuses, while leaving specific implementation details (e.g., auditing and certification) to the Producer Responsibility Organization (PRO) and regulators during rulemaking. Eco-modulation is ideally introduced after the first program plan period, once baseline reporting and system performance information are available to inform equitable and data-driven fee adjustments. Core fee and eco-modulation categories should be harmonized where possible, while the structures and fees rates are detailed in the PRO's program plan, which is submitted for approval to the regulatory body designated in legislation.

This approval process ensures that fee structures serve the goal of incentivizing activities based on the EPA's Waste Management Hierarchy, and that eco-modulation is based upon:

- **Packaging design and material attributes** (e.g., recyclability, use of problematic and unnecessary materials, PCR content, toxics, source reduction): To the extent possible, PROs should aim to base eco-modulated fees upon consistent design guidelines across states to drive consistent design changes. Recommended guidelines include the APR Design Guidelines and the USPP Design Playbooks for Composting, Reuse, and Recyclability.
- **System performance and market indicators** (e.g., actual recycling and recovery rates, net cost to the system, and end market value and stability): Eco-modulation fees will be calibrated not only based on producer reporting, but in response to existing gaps and costs in the state's waste management system. To ensure fees reflect the true performance of each material, all viable sources of collection (e.g., curbside programs, deposit-return systems, business-to-business recovery, store or depot drop-off programs) and material recycling (e.g., plastic-to-plastic recycling, plastic-to-product applications) should be accounted for when determining a material's recycling rate.

All bonuses and maluses should be based on transparent, objective, measurable, and auditable criteria, and measures should be taken to ensure equitable participation and allocation across stakeholder groups, such as providing short-term exemptions to allow time for smaller producers to comply.

Specific Guidance for Bonus Structures

- Packaging should be rewarded for recycled content, recyclability, compostability, and reusability (including return, refill, and concentrates). These bonus categories may be harmonized at the legislative stage, while the inclusion of additional categories and the allocation of bonuses across categories may be state-specific and determined at a later stage.
- Domestic sourcing (from anywhere within North America) of certified PCR should be further incentivized.
- Caps should be implemented on bonuses to ensure overall system costs remain covered.

Specific Guidance for Malus Structures

- Fees for non-compliant packaging should exceed compliance costs as stated in the USPP's Overcoming Barriers to Increasing the Use of PCR document. Penalties should generally be progressive over time, provided that practical and economically achievable solutions are available for producers to meet the requirements, such as redesign options, material substitutions, or proven recycling pathways.
- Packaging that is not designed to be reused, recycled, or composted at end of life should be penalized, as well as packaging containing problematic and unnecessary materials[2], toxins and chemicals of concern. Where toxics are addressed in legislation, they should be aligned with existing state laws to reduce regulatory complexity.

Program plans should be reviewed periodically to allow fees to evolve with market and technological changes. Early reporting is encouraged to inform fee decisions and support producers in planning and compliance.

LEVER 4: PERFORMANCE TARGETS

Performance targets should enable a systems-holistic approach, recognizing the interconnection between circularity goals. The U.S. Plastics Pact supports performance targets that drive progress toward its Roadmap 2.0 goals. Key areas where performance targets are required (such as reuse, recycling, composting, virgin plastic reduction, post-consumer recycled content, elimination of problematic and unnecessary materials) should be identified in legislation, while specific rates, dates, and metrics should be set later through a formal regulatory process. This sequencing ensures clarity of intent in statute while allowing regulators to tailor targets to state-specific infrastructure, technology, consumer behavior, and existing industry efforts. States like Washington and Minnesota offer strong examples of data-informed performance targets tailored to local conditions. Where data is lacking, regulators and PROs should consider a Needs Assessment, with PROs providing supporting rationale.

To ensure circularity targets can be achieved in practice, states building EPR programs should consider whether there are preexisting mandatory PCR content requirements and develop targets accordingly. Additional targets may include source reduction—defined consistently across states—and bale quality standards to ensure material value and end-market readiness.

Initial targets must be achievable and include an embedded policy mechanism for scaling ambition over time. The policy mechanism for scaling must be supported by a financially-viable plan that ensures adequate funding is available in advance of target deadlines to build the necessary infrastructure and programs.

Targets should apply at the material-category level as well as in aggregate at the PRO level to allow flexibility across producer and product categories.

Targets should be revisited and updated regularly to reflect evolving capabilities, market dynamics, and technological advancements. To that end, reporting across all entities is key to understanding where progress is being made across the value chain and to identify potential gaps.

[2]Problematic and Unnecessary Materials: plastic packaging items, components, or materials where consumption could be avoided through elimination, reuse or replacement and items that, post-consumption, commonly do not enter the recycling and/or composting systems, or where they do, are detrimental to the recycling or composting system due to their format, composition, or size – as defined in the U.S. Plastics Pact report.

LEVER 5: RESPONSIBLE END MARKETS

The U.S. Plastics Pact supports a responsible end market definition aligned with the Ellen MacArthur Foundation's circular economy principles (eliminating waste and pollution, and circulating products and materials at their highest value), achieved through the pathways of recycling, reuse, and composting.

Responsible end markets (REMs) can be identified when the resulting materials contribute to achieving established performance targets. REMs can be defined with the following criteria:

- **Outcome-based recycling:** Outlets that verifiably reprocess covered materials into feedstock used in identifiable new products (i.e., plastic-to-plastic or plastic-to-product), not disposal or energy recovery
- **Verification & chain-of-custody:** Use of independent certification/audits where available (following the USPP PCR Certification Principles) and documentation that links inbound bales to measured yields and outbound PCR.
- **A measurement standard for each recognized recycling process:** Should include standard measurement points, as has been done in other countries such as Canada, to drive consistency, transparency, and trust.

Chemical/physical recycling guardrails

Only outputs used to make plastic commodities or chemical precursors should count as recycled tonnage. Mass balance accounting[3] calculations should use Proportional, Non-Proportional—Polymer-Only, or Non-Proportional—Fuel-Exempt allocation methods. Outputs used for energy, fuel, or fuel precursors should not be considered recycled materials and those volumes should be excluded from recycled tonnage calculations[4].

Guardrails for identifying entities qualifying as an end market should be established in legislation, while creating considerations to support innovation efforts in scaling new technologies that adhere to the criteria but have not yet reached full scale production. The operational criteria for verification should be established in regulation, with a robust public stakeholder process. At this point in the process, the PRO can ensure accountability, harmonization, and consistency via third-party verification programs. The ultimate determination should be regularly re-evaluated to reflect technological progress and emerging best practices.

Transparency while maintaining protection of confidential business information for recyclers is essential—harmonization of chain-of-custody standards, potentially led by a federal agency, is encouraged to ensure consistent end-market identification. In lieu of federal harmonization, it is recommended to pursue multi-state harmonization, leveraging PRO coordination, with optional recognition of credible third-party standards.

Strengthening domestic recycling infrastructure is essential to ensuring resilient and transparent end markets. Where feasible, producers and PROs should prioritize end market development efforts with domestic recyclers and postconsumer resin (PCR) suppliers to support circular economies and enhance material traceability.

[3]Chain of custody model in which materials or products with a set of specified characteristics are mixed according to defined criteria with materials or products without that set of characteristics. (ISO 22095).

[4]Beers, Katherine, et al. Assessment of Mass Balance Accounting Methods for Polymers: Workshop Report. NIST Special Publication 1500-206, National Institute of Standards and Technology, Feb. 2022.

The U.S. Plastics Pact supports adherence to the EPA's Waste Management Hierarchy. Mechanical recycling should be prioritized for all materials that cannot first be reduced or reused; chemical or physical recycling may be used in cases where mechanical recycling is insufficient or unfeasible. The USPP supports policies that are technology-agnostic and indifferent to collection location, method, or waste stream to encourage innovation and maximize near-term recovery of recyclable materials, while emphasizing the need for robust guardrails around chemical/physical recycling. See the USPP's Physical & Chemical Recycling Position for further guidance.

A clear and consistent definition of postconsumer recycled content (PCR) is fundamental for tracking progress and validating end markets. PCR material is a covered material (as outlined below) that has reached the end of its usable life and has been recovered from the waste stream (including returns from the distribution chain, aligned with ISO 14021:2016). In the context of plastic packaging, PCR material includes materials such as flakes or pellets produced through mechanical, physical, and chemical recycling, then further used to produce new end products.

LEVER 6: COVERED MATERIALS

The scope of covered materials forms the basis for producer obligations, fee assessments, and data reporting, directly influencing the program's environmental impact and operational efficiency.

A consistent approach to defining covered materials improves program efficiency and outcomes in recycling, reuse, and composting[5]. It also enables consistent on-pack labeling, consumer education, and sorting infrastructure, thereby reducing contamination, improving recovery rates, and supporting market development for recovered materials.

The U.S. Plastics Pact's position on covered materials is guided by the ISO definition of packaging as a product used for containment, protection, handling, delivery, storage, transport, and presentation of goods—from raw materials to finished products (ISO 21067-1:2016).

Covered materials should be clearly defined during legislation, and both the scope and measurement type (typically weight-based) should be harmonized across states. Legislators should prioritize aligning legislative scope with definitions used in other state EPR laws to reduce administrative burden and compliance costs for producers. Following enactment, state agencies and PROs should continue efforts to harmonize during rulemaking by referencing covered materials lists and measurement methodologies from other state programs.

The U.S. Plastics Pact supports the coverage of business-to-consumer packaging materials and recommends that the inclusion of business-to-business packaging be determined based on the state's regulatory context, existing recycling performance and material management needs, and desired outcomes rather than prescriptive requirements. Where effective recovery systems already exist, certain materials may be excluded. Coverage should be determined by the function of the item as packaging (i.e., a use-based, material agnostic approach), not its material composition, to ensure practical implementation.

Exemptions should be kept to a minimum and applied consistently across state programs to prevent free riders and simplify producer compliance and state oversight. The PRO will assess the impact of exemptions to allow for data-driven updates after system implementation.

[5]Positions supporting alignment in definition of these categories include the U.S. Plastics Pact's Reuse Policy Guidance and Design for Circularity Playbooks, PSI's guide Supporting Reusable Food Serviceware, and Upstream's Embracing Reuse in U.S. Packaging EPR Programs.

E-commerce packaging is explicitly covered; in determining responsibility for e-commerce packaging, the regulatory process should strive to achieve uniform guidance on responsibility for e-commerce packaging to reduce confusion, standardize data reporting, and maximize material collection. States typically develop hierarchies of responsible entities to identify the actor with the greatest ability to influence packaging design who bears responsibility for introducing the product into the state.

Standalone products sold without content, whose primary function mimics packaging (e.g., trash bags, aluminum foil, food storage bags), should be excluded (the packaging containing these products remains covered).

States can develop accepted/collected lists, to be updated within PRO program plans as infrastructure and access expands. In cases where such lists exist, they should serve as starting points, rather than upper limits. Legislation should include periodic review and regulatory expansion of covered materials based on an approved methodology, to include infrastructure evolution, market demand, and end-market capabilities.

CONCLUSION

The U.S. Plastics Pact EPR Policy Position provides a strategic foundation for building effective EPR legislation that balances harmonization of core elements with flexibility for state-specific implementation. By centering circularity, transparency, and equity, and organizing around six priority levers, this framework supports packaging systems that reduce environmental impact and foster resilient end markets.

As states move forward with EPR implementation, collaboration among stakeholders, including producers, regulators, and Producer Responsibility Organizations (PROs), will be critical. This document offers actionable guidance for designing programs that are responsive to local conditions while contributing to national progress. Periodic review and refinement of EPR policies, informed by robust reporting and verification, will ensure continued alignment with technological advancements, market dynamics, and sustainability goals.

> ***...this framework supports packaging systems that reduce environmental impact and foster resilient end markets.***

Ultimately, this position reflects a shared commitment to transforming the packaging landscape through extended producer responsibility, driving systemic change toward a circular economy.