Unpacking Packaging Laws: EPR and PCR in the Packaging Circular Economy

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Throughout the last three decades, numerous states have enacted legislation establishing programs that require companies to take responsibility for the lifecycle environmental impacts of the materials they introduce into the marketplace. Two examples of particular importance are Extended Producer Responsibility (EPR) and Post-Consumer Recycled Content (PCR). These programs allocate responsibility for materials to the entities that introduce them into the marketplace, generally referred to as "producers." EPR and PCR programs require producers to pay for the recycling of the materials they introduce and that the materials be made with a minimum percentage of recycled content. EPR programs apply to items such as batteries, paint, needles, and mattresses. PCR programs apply to items such as paper products, glass containers, and single-use carryout bags. In recent years, states have also begun using these programs to address packaging of consumer products. These programs are far-reaching and will likely impact millions of businesses across the country.

This article provides an overview of packaging EPR and PCR programs, discusses how they are connected, and provides a practical analysis of the key information an environmental attorney should know. This article covers EPR and PCR programs across the country and does not focus on any one state's program. Practitioners should note that, although there are many commonalties, each state's program is slightly different, and general statements about EPR and PCR programs throughout this article may not apply to all states. Practitioners should conduct state-specific legal research before providing any legal advice to clients.

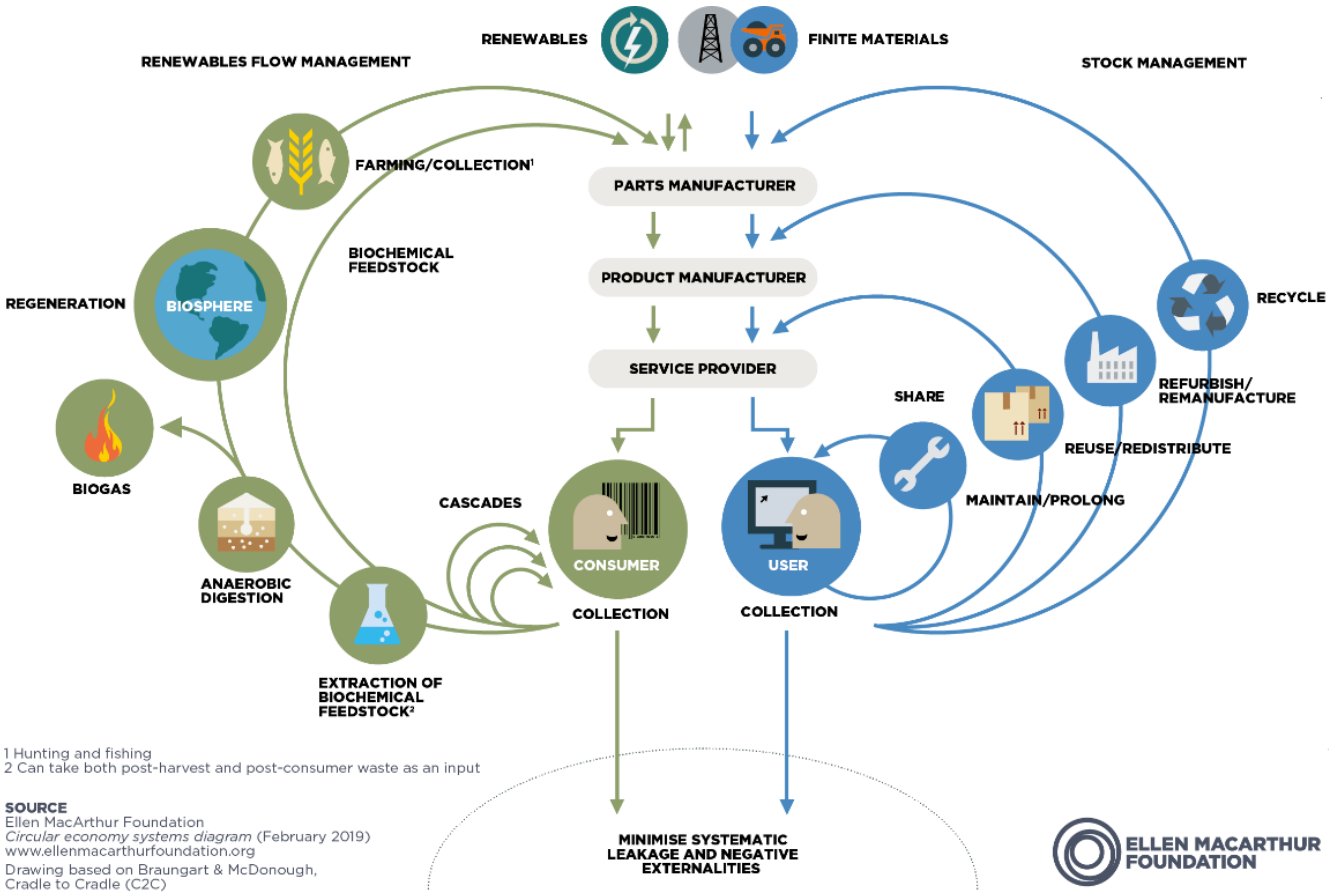
I. Circular Economy: How Extended Producer Responsibility laws and Post-Consumer Recycled Content laws work together.

Most products that enter the marketplace work their way through a linear economy and end up in a landfill. Linear economies are called "linear" because they are a straight line with no reuse of materials.[1] Products going through a linear economy are made with raw materials, purchased and used by a consumer, and when used up or worn out, deposited in a waste bin to likely end up in a landfill.

As resources are depleting and landfills are filling, the concept of a circular economy has emerged. The goal of a circular economy is to avoid discarding the original product, and instead, to reuse it as much as possible. This reuse can come in various forms, such as using a reusable water bottle instead of one that is for single-use, or recycling and reusing the plastic in a single use bottle to make a new bottle. Figure 1 below is a representation of a circular economy.

[1] Circule Solutions, *Circular Packaging*, https://circulesolutions.com/circular-packaging (last visited July 8, 2025).

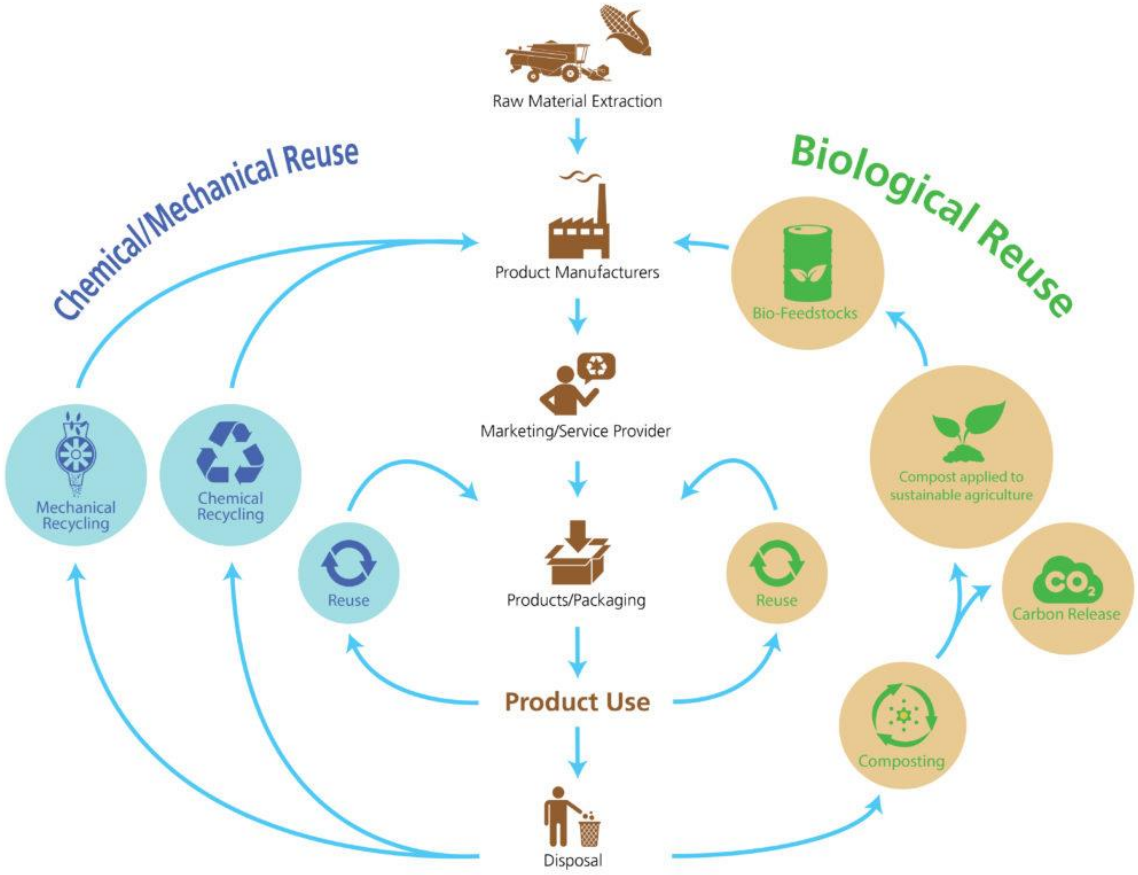
Figure 1 – The Circular Economy[2]



EPR and PCR programs were both designed to create a circular economy for packaging by incentivizing and mandating the collection and reuse of packaging materials. EPR programs are the downstream mechanism that create recycled materials, while PCR programs are the upstream mechanism that create a market and demand for the recycled materials. EPR programs mandate the collection and recycling of packaging materials while also incentivizing producers to change their packaging. PCR programs create a market for recycled materials by mandating that certain containers, typically food containers, be made with a minimum percentage of recycled materials. Both programs incrementally alter the packaging lifecycle by increasing fees and minimum content of recycled material over time. When fully implemented, the circular economy for packaging will look similar to Figure 2 below.

[2] Ellen MacArthur Foundation, *Circular economy systems diagram (February 2019)*, https://www.ellenmacarthurfoundation.org/circular-economy-diagram.

Figure 2 – Packaging Circular Economy[3]



II. Extended Producer Responsibility

The idea of EPR is not a new development; it began in Europe in the 1990s.[4] As governments struggled to keep up with the physical and financial demands of maintaining robust waste management programs, they sought a more efficient paradigm. The main tenant of EPR programs is that the producer, or manufacturer, of the product should be responsible for that product throughout its lifecycle by either directly collecting and recycling the product, or by providing funding for another entity to do so. While the U.S. has been slow to adopt EPR laws a few states have enacted them. These states have established programs focusing on waste streams that are difficult to manage or particularly dangerous to the environment or human health. Some of the first EPR programs were for batteries, with states such as Minnesota and New Jersey

[3] Circule Solutions, *Circular Packaging*, https://circulesolutions.com/circular-packaging (last visited July 8, 2025).

[4] Institute of Local Self-Reliance, *The Concepts of Extended Producer Responsibility and Product Stewardship* (Jan 13, 1993), https://ilsr.org/articles/the-concepts-of-extended-producer-responsibility-and-product-stewardship/ (last visited July 8, 2025).

enacting take-back provisions for rechargeable batteries as early as the 1990s.[5] More recently, states have enacted EPR programs for paint and paint containers, mercury thermostats, sharps and needles, electronics, and pharmaceuticals.[6] The development of packaging EPR programs began in the state of Maine with the adoption of its *Act to Support and Improve Municipal Recycling Programs and Save Taypayer Money* in 2021.[7]

a. **Creation and Implementation of EPR programs.**

Like most government programs, EPR programs are created through legislation. Typically, the state law spells out the broad goals of the act and sets specific, measurable milestones, such as the recycling of a specific percentage of each covered material[8] (plastic, glass, metal, etc.), or the development of educational resources.[9] The state law also delegates authority to the state-wide environmental administrative agency, or state-wide recycling agency in California, to promulgate, implement, and enforce the rules of the program.

States have sought significant input from the public during the rule development process. In California, the responsible agency, CalRecycle, held public meetings in both English and Spanish, offered multiple written comment periods, and re-drafted its proposed regulations twice.[10] Other states, such as Colorado and Maryland, created a Producer Responsibility Advisory Board that held public meetings and advised the responsible agency during the development of program rules.[11] In some states, these advisory boards continue to meet and advise the agencies during implementation of the program.[12] Once the regulations are approved, the responsible agency moves on to selecting a Producer Responsibility Organization or PRO.

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[5] Jennifer Nash & Chrisopher Bosso, *Extended Producer Responsibility in the United States: Full Speed Ahead?* 10 (May, 2013).

[6] Product Stewardship Institute, *EPR laws in the United* States, https://productstewardship.us/epr-laws-map/ (last visited July 8. 2025).

[7] Maine Department of Environmental Protection, *Stewardship Program for Packaging*, https://www.maine.gov/dep/waste/recycle/epr.html (last visited July 8, 2025).

[8] See, e.g., Oregon Revised Statutes § 459A.926.

[9] See, e.g., Oregon Revised Statutes § 459A.893.

[10] See generally, Cal Recycle, *Plastic Pollution Prevention and Packaging Producer Responsibility Act,* https://calrecycle.ca.gov/packaging/packaging-epr (last visited July 8, 2025).

[11] See, Colorado Department of Public Health & Environment, *Producer Responsibility Advisory Board*, https://cdphe.colorado.gov/hm/epr-advisory-board (last visited July 8, 2025), and Maryland Department of the Environment, *Extended Producer Responsibility,* https://mde.maryland.gov/programs/land/RMP/Pages/Extended-Producer-Responsibility-Program.aspx (last visited July 8, 2025).

[12] See, Oregon Department of Environmental Quality, *Oregon Recycling System Advisory Council*, https://www.oregon.gov/deq/recycling/pages/orsac.aspx (last visited July 8, 2025).

For the EPR programs to achieve their goal of transferring the responsibility for recycling packaging materials from local municipalities and taxpayers to the producers of that packaging, there must be some type of industry-wide coordinated effort. EPR programs require responsible agencies to select at least one state-wide PRO to lead this coordinated effort. To apply to be a PRO, the entity must be a non-profit organization. To date, the 4 states that have begun implementing an EPR program have all selected the same entity as a PRO, Circular Action Alliance (CAA).[13] The remaining 3 states that have passed EPR legislation have not yet selected a PRO. CAA is a non-profit, producer-led organization that "is committed to helping producers comply with EPR laws, delivering harmonized best-in-class compliance services, and working with governments, businesses, and communities to reduce waste and recycle more."[14] CAA was founded by more than 20 large-scale producers of packaging:[15] Amazon, Campbell's, Coca Cola, Colgate Palmolive, Conagra, Danone, Ferrero, General Mills, Georgia-Pacific, Ikea, Dr. Pepper, Kraft, L'Oreal, Mars, Mondelez, Nestle, Niagara, Pepsi, P&G, SC Johnson, Starbucks, Target, and Walmart.[16] As the only approved PRO, CAA has created state-specific non-profits to be responsible for educating stakeholders and consumers, and for implementing the EPR programs.[17] Producers are required to join a PRO and pay dues that will fund the PRO's activities implementing the EPR program.

b. **Producer Dues and Eco-Modulation.**

EPR programs require producers to join a PRO and pay dues that are calculated based on a series of factors that vary by state. States have developed complex formulas to calculate producer dues based on the quantity, in pounds, of covered materials that each producer introduces into the state.[18] Different material types have different dues per pound.[19] These dues are developed based on the PRO's expenses to collect and recycle that specific material.[20] To complicate the matter, most states have adopted "eco-modulations," which encourage producers to shift packaging toward materials that are less harmful to the environment and easier to recycle by reducing fees for those specific materials.[21] States often give eco-modulations based on factors such as the recyclability of the packaging material, the post-consumer recycled content of

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[13] Circular Action Alliance, *About Circular Action Alliance*, https://circularactionalliance.org/ (last visited July 8, 2025).

[14] *Id.*

[15] *Id.*

[16] *Id.*

[17] See, e.g., Oregon Circular Action Alliance, *Oregon*, https://circularactionalliance.org/oregon (last visited July 8, 2025).

[18] See generally, Oregon Circular Action Alliance, *Oregon Program Plan*, https://www.oregon.gov/deq/recycling/Documents/CAAApprovedPlan.pdf (last visited July 8, 2025).

[19] See generally, *Id.*

[20] See generally, *Id.*

[21] See e.g., *Id.*

the packaging, and the ease of packaging collection.[22] Some states also incentivize producers to change their packaging with eco-modulations that are calculated based on how the packaging has changed in recent history, using factors such as an increase in product to package ratio, an increase in recyclability, or a complete change to a different packaging material.

c. **Who is a Producer?**

EPR programs allocate the burden of funding recycling programs to the "responsible producer." At first glance, it would seem that the responsible producer is the party manufacturing the packaging; however, that assumption is incorrect. EPR programs allocate the cost burden to the producer of the *item* that comes in the packaging, not to the producer of the packaging itself. States make this allocation based on the implicit assumption that the producer of the item has the contractual leverage to control the packaging of the item. EPR statutes and regulations include priority listings to determine the responsible producer. The fact that each state's definition of producer is slightly different leads to great uncertainty about which entity is the responsible party.

Generally speaking, for most EPR programs:

i. if the manufacturer of the product owns the brand, or if there is no brand, the manufacturer is the producer;
ii. if the brand is owned by someone other than the manufacturer, the brand owner, or licensee of the brand, is the producer; and
iii. if no entity in the U.S. meets the above descriptions, the importer of the product is the producer.[23]

Unfortunately, these three options do not cover all the manufacturing possibilities in the modern world. Brand owners often do not manufacture, or direct the manufacturing, of the packaging for their products; they simply buy the packaging that is available to them. Other brand owners license their brand's intellectual property to manufacturers but retain some control over the product specifications. These unique situations, and others, have led to a great deal of confusion about which party is the responsible producer.

Determining which entity is the responsible producer is important for two reasons. First, as discussed above, the responsible producer must join the state's PRO and pay yearly dues based on the pounds of packaging materials it sent to the state. Second, the responsible producer must submit an annual report detailing the weight, by type of material, it sent to the state. To prepare such a report, producers must maintain records of which types of materials they sent into which states. This administrative burden can be significant, especially for entities that have hundreds or thousands of products. To add to the administrative burden, if a producer sells its product to a wholesaler, and the wholesaler then sells the product to a customer-facing entity in another state, the producer is still responsible for the packaging materials, even though it may not have knowledge of where its products were sent.

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[22] See e.g., *Id.*

[23] E.g., Colorado Revised Statutes § 25-17-706(30)(a) and Oregon Revised Statutes § 459A.866(1).

d. Physical and Direct-to-Consumer Sales.

EPR programs apply to products bought in physical stores and those shipped directly to consumers by online retailers. When products are purchased online and sent directly to consumers, there is an additional layer of packaging, e.g., the box the products are shipped in. Some states exempt portions of bulk shipping materials when the item is sold at a physical location; however, packaging for direct-to-consumer sales generally must be reported. For direct-to-consumer sales, most EPR programs allocate responsibility for the shipping materials to the shipper, but still require the producer of the item to report and be responsible for the packaging of the item, even though the producer may not have knowledge that the item was shipped to a particular state.[24]

e. Covered Materials

While EPR programs in states cover different materials, there are a few commonalities. Packaging made out of plastic, cardboard, and glass, are nearly always covered materials. Most states break those broad categories down into smaller subcategories and regulate those subcategories in different ways. As an example, Oregon's EPR PRO plan breaks down the covered material list into 60 separate materials, with a separate dues rate for each material type. The PRO plan includes estimated low and high dues rates that will be re-calculated after the program is implemented. Figure 3 contains a sample of the materials and the PRO plan's estimated dues rates.

Figure 3 – Sample of OR PRO Plan Covered Materials and Dues Rates.[25]

Material Class	Covered Material	Low Est. Dues Rate Per Pound	High Est. Dues Rate Per Pound
Metal	Aluminum Containers	6 ¢	8 ¢
	Aluminum Foil & Molded Containers	43 ¢	58 ¢
	Aluminum Aerosol Containers	73 ¢	98 ¢
	Steel Containers	3 ¢	3 ¢
	Steel – Other Forms	24 ¢	32 ¢
Glass and Ceramics	Bottles, Jars, & Other Containers	10 ¢	14 ¢
	Ceramic – All Forms	48 ¢	64 ¢
Plastic – Rigid	PET[26] Clear Bottles, Jugs, & Jars	17 ¢	23 ¢
	PET Pigmented/Colored Bottles, Jugs & Jars	58 ¢	78 ¢

[24] Circular Action Alliance, *Covered Materials & Producer Definitions: Colorado and Oregon*, (June 2025) https://static1.squarespace.com/static/64260ed078c36925b1cf3385/t/683dfa7823960e3fa03725bc/1748892281594/Covered+Materials+%26+Producer+Definitions+%28OR%26CO%29+-+June+2025.pdf.

[25] Oregon Circular Action Alliance, *Oregon Program Plan*, 199 – 203 https://www.oregon.gov/deq/recycling/Documents/CAAApprovedPlan.pdf (last visited July 8, 2025).

[26] Polyethylene Terephthalate

	PET Lids	46 ¢	61 ¢
	HDPE[27] Clear Bottles, Jugs & Jars	17 ¢	23 ¢
	HDPE Pigmented/Colored Bottles, Jugs & Jars	19 ¢	25 ¢
Plastic – Flexible	HDPE or LDPE[28] Flexible & Film Items	54 ¢	72 ¢
	PP[29] Flexible and Film Items	107 ¢	143 ¢
	Plastic Laminates and Other Flexible Plastic Packaging	107 ¢	143 ¢
Paper/Fiber	Aseptic & Gable-Top Cartons	29 ¢	39 ¢
	Kraft Paper	3¢	3¢
	Corrugated Cardboard	3¢	3¢

Most EPR programs exempt numerous products from the reporting requirements. First and foremost, products that are regulated under a different EPR program, such as paint cans, needles, and beverage containers with a refund value, are generally exempt from reporting requirements. EPR programs also generally exempt certain items by name, such as rigid pallets used as the structural foundation of transporting goods, packaging supplied in connection with prescription and nonprescription drugs, and wine and spirit containers.[30]

It is rare that a product's packaging is made of only one type of material, for example packaging for a pop-up, cube box of tissues would normally have three material types: (1) the plastic wrap on the outside of the box; (2) the tissue box; and (3) the plastic film that holds the tissue up and outside of the box. Whether material types must be reported separately or together depends on whether the packaging components and materials are generally separated before recycling begins.[31] If packaging components are intended to be separated by the consumer (e.g., the plastic wrap around the tissue box), they must generally be reported separately. However, if the components are designed to remain attached after the product is consumed (e.g., the box and the plastic film that holds the tissue up and outside of the box), then the packaging should be reported in the material type category of the material that makes up the majority of the components' combined weight.

[27] High Density Polyethylene.

[28] Low Density Polyethylene.

[29] Polypropylene.

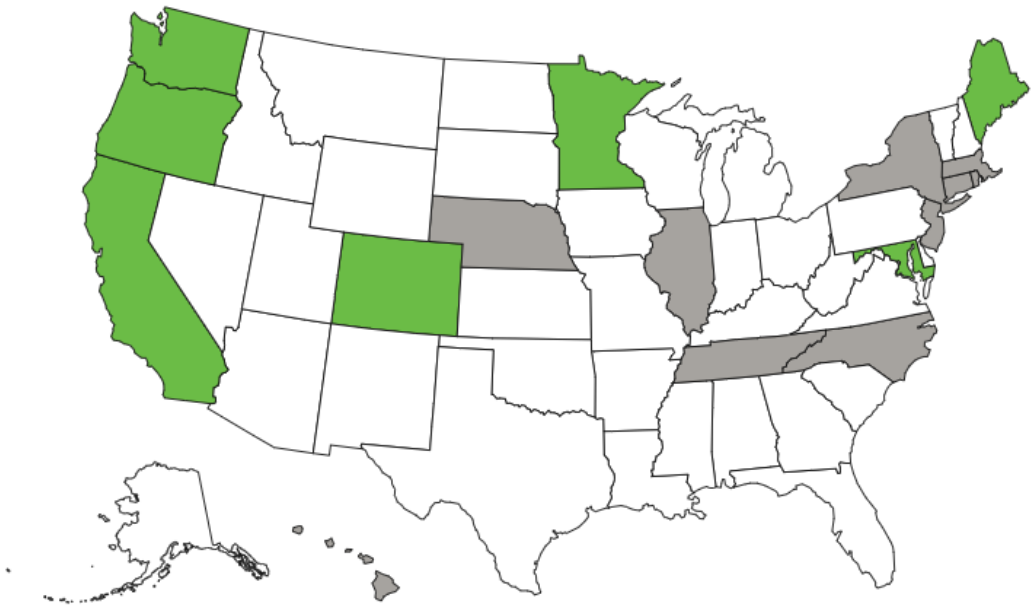
[30] See Circular Action Alliance, *Covered Materials & Producer Definitions: Colorado and Oregon*, 27 (June 2025) https://static1.squarespace.com/static/64260ed078c36925b1cf3385/t/683dfa7823960e3fa03725bc/1748892281594/Covered+Materials+%26+Producer+Definitions+%28OR%26CO%29+-+June+2025.pdf.

[31] Circular Action Alliance, *If a package consists of multiple materials (e.g., aluminum aerosol can with a a plastic cap), should they be reported separately or together?*, https://circularactionalliance.org/pwg-library (last visited July 8, 2025).

f. **What States have passed EPR Legislation?**

As of July 1, 2025, seven states have enacted EPR programs—California, Colorado, Maine, Maryland, Minesota, Oregon and Washington. Additionally, in 2025, legislation that would create EPR programs has been introduced in 10 other states—Connecticut, Hawaii, Illinois, Massachusetts, Nebraska, New Jersey, New York, North Carolina, Rhode Island, and Tennessee. In Figure 4 below, states that have passed an EPR law are noted in green and states where EPR legislation has been introduced in 2025 are noted in gray.

Figure 4 – EPR States[32]



g. **Timelines**

The seven states that have passed EPR laws are in various stages of implementing their programs with Oregon being the furthest along, and Washington having just begun. Figure 5 is a table of past and upcoming deadlines with which producers must comply.

[32] Sustainable Packaging Coalition, *Introduction to the Guide for EPR Proposals,* https://epr.sustainablepackaging.org/ (last visited July 8, 2025).

Figure 5 – EPR Deadlines, Past and Future[33]

Date	Description	State
March 31, 2025	Oregon Deadline to submit or change reported material supply data.	Oregon
July 1, 2025	Oregon Program Starts & Fees Begin	Oregon
July 1, 2025	Minnesota Registration Deadline	Minnesota
July 31, 2025	Colorado Reporting Deadline	Colorado
August 1, 2025	California Registration Portal Opens	California
August 1, 2025 – September 26, 2025	Minnesota Interim Reporting Period	Minnesota
August 15, 2025	Oregon LCA Bonus A Report Deadline	Oregon
September 5, 2025	California Producer Registration Deadline	California
September 15, 2025	California Producer Reporting Portal Opens	California
September 26, 2025	MNISA Signature Deadline and Interim Report Date	Minnesota
November 15, 2025	California Reporting Deadline	California
January 1, 2026	Colorado Program Begins	Colorado
January 1, 2027	California Program Begins	California

h. **Producer Exceptions**

State EPR programs are designed to impact nearly every entity that sells products into that particular state. The requirements of joining a PRO and reporting packaging could place a heavy burden on small businesses. To reduce this burden, states have implemented certain exemptions from some EPR program requirements, although producers generally still have to register with the PRO and file a form stating that they satisfy one of the exemptions. Most states

[33] Circular Action Alliance, *Producer Resource Center,* https://circularactionalliance.org/producer-resource-center (last visited July 8, 2025).

have implemented a *De Minimis* exemption that applies to businesses that: (1) have a small annual revenue; or (2) only send a small amount of packaging into the state. In most states, the *De Minimis* exemption applies to businesses that had a nation-wide gross revenue of less than $1 million in the previous calendar year or introduced less than one ton of packaging (including all regulated materials) into the state in the previous calendar year. States have also exempted non-profit organizations, government agencies, and charitable food distributors from many EPR requirements. While these exemptions will likely relieve the reporting burden from "mom and pop" businesses, these entities will still need to track their packaging to determine if they satisfy the exemption.

III. Post-Consumer Recycled Content

a. Creation

EPR and PCR programs are similar in that they both impact packaging and are both created by state legislatures and implemented by a state agency. The two programs differ in covered products, covered materials, and compliance requirements. While there are outliers, PCR programs generally focus on plastic packaging for food and personal care items and are much less inclusive than EPR programs. PCR programs require regulated packaging to be manufactured with a minimum level of post-consumer recycled materials. Some states require all regulated packaging to meet the minimum requirements, while others require that a producer's packaging, on average, meet the minimum requirements. The responsible party varies by state, with some states making the "producer" (using a similar definition to that discussed above) responsible, and others making the manufacturer responsible.

b. Implementation of PCR Programs

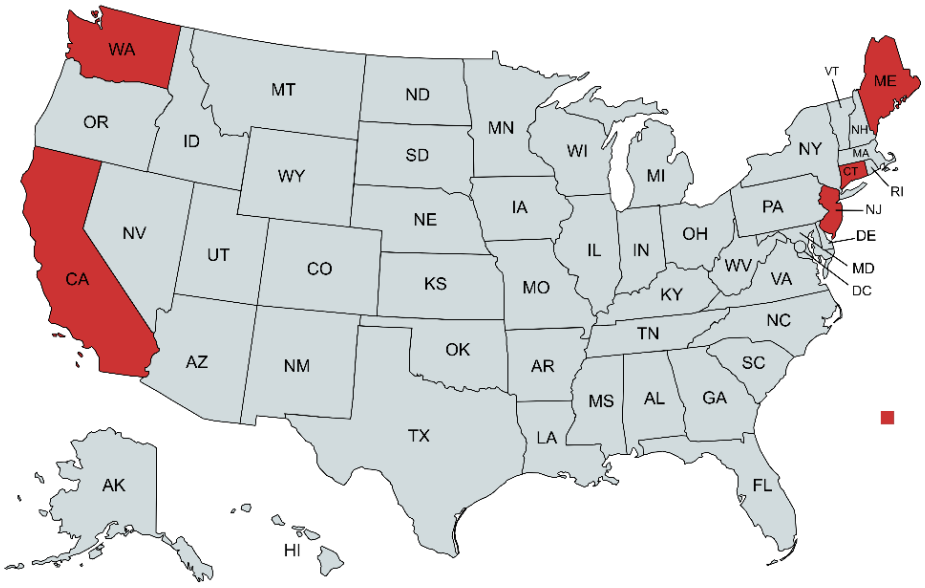
PCR programs are typically implemented by the state environmental agency, most states do not have a third-party coordinating entity. Responsible parties are required to register with the state and typically must pay an annual registration fee that ranges from $500 to $1000 a year, depending on the state. Instead of requiring responsible parties to pay dues based on the amount of covered materials sent into the state, the state assesses fees and penalties against entities that violate the requirements set out by the PCR program. Each year, the responsible party is required to submit a report to the state environmental agency detailing the PCR content of the regulated packages it sent to the state.

c. States with PCR Programs

There are five states that have passed PCR laws requiring packaging materials to be made with a minimum percentage of recycled materials—California, Connecticut, Maine, New Jersey, and Washington. While there are outliers, PCR programs are generally less inclusive than EPR programs and typically control plastic food packaging, with a general focus on beverage containers. California, Connecticut, and Maine's programs focus exclusively on beverage containers, while New Jersey and Washington have also included other items such as personal care products and trash bags. As a whole, implementation dates for PCR requirements began in

2023, with minimum content requirements increasing until 2036. The map in Figure 6 shows the states that have passed PCR laws.

Figure 6 – PCR States



IV. How Environmental Attorneys can Assist Clients

As more and more states create EPR and PCR programs, ensuring complete compliance becomes more difficult. Environmental attorneys have an opportunity to inform clients who might be affected by these new programs. In doing so, attorneys will provide added value to their clients by showing the client that the attorney is staying abreast of regulations that could affect the client's business, and by helping them avoid costly administrative penalties for non-compliance. Here are a few simple steps for attorneys to identify and assist potentially affected clients.

a. Identify clients that could be impacted by EPR and PCR programs.

The impact of EPR and PCR programs is far reaching. Clients whose business activities involve manufacturing, brand ownership, shipping, distributing, wholesaling, online sales, importing, product packing, providing fulfillment services, and others whose business activities are a part of the supply chain could potentially be impacted by EPR and PCR programs. Attorneys may wish to review their book of business to identify clients that could potentially be regulated by EPR and PCR programs. Once clients are identified, attorneys may wish to compare the client's business activities to state-specific EPR and PCR programs to determine if the client is a responsible party under either an EPR or PCR program.

b. Contact clients and inform them of the new programs.

If a client appears to be a producer under an EPR program or responsible party under a PCR program, attorneys should consider contacting and informing the client of the new programs that could impact its business operations. Even if the attorney does not wish to provide assistance with regulatory compliance, ensuring the client is aware of the programs will build credibility for the attorney. If the attorney wishes to assist the client with compliance, the attorney should carefully consider which state EPR and PCR programs are applicable to that particular client's business activities. If the attorney does not wish to provide compliance assistance, the attorney should be prepared with a recommendation of an attorney who could provide such assistance.

c. Assist with compliance and risk mitigation.

Environmental attorneys can assist clients with compliance in numerous ways, the first being a full evaluation of the client's business activities to determine how EPR or PCR programs apply and if the client may be eligible for an exemption. After determining that the programs are applicable to your client's activities, environmental attorneys can assist clients with compliance by developing protocols and by conducting mock audits. Attorneys should also consider reviewing the client's existing contracts to determine if they allocated EPR or PCR program compliance responsibility, and new contracts, to prospectively allocate compliance responsibility to the other party. Environmental attorneys can also provide ongoing counsel by assisting with public comments as new EPR and PCR programs are developed and providing guidance on how newly adopted regulations will affect the client's activities.

V. Conclusion

The development and implementation of state EPR and PCR programs represents a paradigm shift from traditional, linear waste management models toward a circular economy in which packaging is recycled and reused. These programs shift the financial and logistical burdens of material recovery, recycling, and reuse from local governments and taxpayers to the producers of packaging material. Together, these programs aim to reduce landfill waste and reliance on new materials, and to create a more resilient recycling infrastructure.

For environmental attorneys, the expansion of EPR and PCR programs offers a strategic opportunity. Clients across industries, many of whom have never faced environmental obligations, now need counsel on whether, when, and how they must comply. Attorneys should consider preparing to assist their clients with compliance obligations. As more states adopt laws and begin enforcement, environmental lawyers will play a key role in helping businesses navigate this evolving legal landscape.