



Oregon Department of Environmental Quality

Topic paper: Substantive changes to recycling acceptance lists for pressurized cylinders

RMA Rulemaking 3: Prepared for Rulemaking Advisory Committee discussion – Jan. 27, 2026

Recycling Acceptance Lists OAR 340-090-0630

Convenience Standards OAR 340-090-0640

Performance Standards OAR 340-090-0650

Summary of proposed revisions

DEQ is proposing to make substantive changes to producer responsibility organization obligations relating to pressurized cylinders, which are a form of packaging and a covered product under the Recycling Modernization Act. At present, pressurized cylinders are included in the Producer Responsibility Organization Recycling Acceptance List, and are required to be collected for recycling starting Jan. 1, 2028. Circular Action Alliance has recommended removing this material from its recycling obligations, citing high costs associated with meeting convenience and performance standards, which are also contained in rule. With these proposed rule revisions, DEQ is proposing to maintain pressurized cylinders on the PRO Recycling Acceptance Lists, but to significantly modify convenience and performance standards in order to reduce costs.

Background

Producer responsibility organizations are required to provide for the collection and recycling of materials on the Producer Responsibility Organization Recycling Acceptance List (OAR 340-090-0630(3)), in accordance with convenience standards (OAR 340-090-0640) and performance standards (OAR 340-090-0650). Collection targets (OAR 340-090-0660) must also be met for many of these materials.

In the first (2023) rulemaking for the Recycling Modernization Act, the Environmental Quality Commission included pressurized cylinders in the PRO Recycling Acceptance List. Responding to concerns subsequently expressed by CAA, the effective date for that listing was changed to Jan. 1, 2028, as part of the second (2024) RMA rulemaking.

Pressurized cylinders are packaging, and packaging is a covered product under the Recycling Modernization Act, unless exempted. The Legislature directly exempted one format of pressurized cylinder (“liquefied petroleum gas containers that are designed to be refilled”) in amending Senate Bill 582 (2021). In 2024, the Environmental Quality Commission further exempted a few additional types of pressurized cylinders such as refillable pressurized cylinders used for pure oxygen or hydrogen, as well as larger cylinders for acetylene and carbon dioxide. However, many other types of pressurized cylinders remain covered products, including one-pound propane cylinders used for camping stoves, backpacking fuel cylinders, smaller carbon dioxide cylinders for at-home carbonated beverage dispensers, bicycle tire inflation cylinders, and small nitrous oxide canisters. By definition, pressurized cylinders do not include aerosol cans.

In placing pressurized cylinders on the PRO Recycling Acceptance List, the EQC also adopted convenience and performance standards for their recycling.

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Convenience standards for pressurized cylinders are the same as standards for several other covered products on the PRO Recycling Acceptance List, including aerosols, aluminum foil, shredded paper, and block white expanded polystyrene. Generally speaking, the convenience standards require the PRO to contract with a wide variety of existing recycling depots or drop off centers that meet specified conditions if doing so is “possible”. In some communities, the PRO is required to provide additional collection points based on community population and political boundaries of local governments.

Collection of all materials on the PRO Recycling Acceptance List is also held to performance standards. Most performance standards are general in nature, applying to all collections. The current rules, however, identify several additional performance standards specific to pressurized cylinders. These include:

- A PRO may not accept pressurized cylinders from any non-residential generator unless that generator affirms in writing its status as a very small quantity generator (exempt from RCRA hazardous waste generator requirements).
- Pressurized cylinders not suitable for reuse must be processed by a regulated hazardous waste treatment facility, with containers sent to a metal recycling.

As part of its 2023 rulemaking, the Commission adopted the first rules to define standards for Responsible End Markets (OAR 340-090-0670). As part of those standards, rules clarified a statutory requirement that the PRO must ensure that materials are delivered to responsible end markets if doing so is “practicable”. The “practicability” standard in rule included a financial benchmark - \$2,017 per ton in 2021 dollars, with an annual adjustment for inflation. Rules allow the PRO to claim that it costs more than the benchmark to ensure that any given material flows to responsible end markets. If DEQ, after consultation with the Oregon Recycling System Advisory Council, agrees with the PRO’s claim, then the PRO is released of its obligation, and DEQ is required to consider removing the material from the relevant recycling acceptance list.

In September 2025, Circular Action Alliance submitted to DEQ a [report](#) claiming that the cost to recycle pressurized cylinders in accordance with performance standards and other federal regulations would exceed the practicability benchmark in rule. A subcommittee of the Oregon Recycling System Advisory Council reviewed CAA’s claim at a meeting in December 2025. DEQ has not yet issued a formal acceptance of CAA’s claim of impracticability. However, CAA’s cost estimates for the lowest-cost option identified in its report are almost nine times higher than the practicability threshold, and no questions raised during the December subcommittee meeting suggested that the gap between estimated costs and cost threshold was likely to be closed.

Considerations

Pressurized cylinders, unless exempted, are a covered product. Cylinders are typically steel, a material that is both highly recyclable, and environmentally beneficial to recycle. Because of their potential to contain pressurized gases that can be both explosive and flammable, management of cylinders can be expensive and dangerous. Metal recyclers require cylinders to be visibly punctured prior to accepting them. Their management often imposes significant costs on local governments.

The high cost of managing pressurized cylinders is jointly a consequence of the package and the product which it may contain. To recycle the cylinder, the package must be punctured and evacuated of product. Depending on product and whether the package is delivered empty or not, evacuation of the product can add to the expense. CAA has previously stated that the cost of managing product (e.g., residual propane) should

not be in the scope of a producer responsibility organization's obligations. Pressurized cylinders, if not otherwise exempted, are a covered product, but they cannot be recycled unless evacuated of product, and the intent of the law is to improve responsible management of covered products through a shared responsibility framework.

While cylinders are generally considered safe for commerce, the presence of flammable contents under pressure does create some added risk of fires and explosions. In addition, US Department of Transportation hazardous material requirements create some cost impacts to non-governmental entities when transporting non-depressurized cylinders. DEQ is inclined to consider that the current convenience standard, which in some communities would require pressurized cylinders to be collected at non-permitted locations, and then transported for consolidation and treatment elsewhere, does create some significant economic impacts to the PRO.

However, in the absence of extended producer responsibility for pressurized cylinders, generators, local governments, and solid waste system operators will be left to manage the material. As such, pressurized cylinders (both empty and full) may end up in the garbage system. In some cases, generators may treat them inappropriately as scrap metal, either by placing them into commingled collection or separate scrap metal collection. Some communities in Oregon are serviced by household hazardous waste programs that accept pressurized cylinders. In such cases, safe management occurs but sometimes at significant cost. For example, Metro recently reported that its hazardous waste disposal contractor charges \$78 to accept and dispose of a 2.2 liter nitrous oxide canister that retails for \$87.95.

Lane County offers an example of how one local government in Oregon currently manages pressurized cylinders. Lane County accepts one-pound propane cylinders, both empty and not, at its network of 15 solid waste transfer stations that are located throughout the county. County staff transport the cylinders, using the exemption from DOT hazardous material regulations for government operations provided at 49 CFR 171.1(d)(5), for consolidation at the County's permanent HHW facility, where they are assessed and triaged. Approximately one percent of returned cylinders are considered "full or almost full" and are recirculated for reuse. Of the remainder, approximately 60 percent are considered "empty or almost empty" while 40 percent contain enough content to merit disposition through hazardous waste incineration. The empty/mostly empty aerosols are punctured using a special tool and marked with fluorescent paint before placing them in a drop box that goes to a local metal recycler.

In commenting on CAA's practicability report, Lane County specifically asked if some form of cost-sharing could be provided that would help the County manage these materials. That shared responsibility approach would be consistent with the spirit of the RMA, and might provide sufficient incentive to encourage other communities, over time, to adopt a service similar to Lane County's.

Providing full compensation to local governments and service providers for the costs of managing all cylinders, including full and mostly-full cylinders, may be achieved by a separate extended producer responsibility program for pressurized cylinders. In the meantime, DEQ is inclined to support Lane County's request to apply the packaging responsibility elements of the Recycling Modernization Act to at least partially address the challenges posed by pressurized cylinders.

Proposed rule concept

1. Maintain pressurized cylinders on the PRO Recycling Acceptance List.
2. Apply a modified set of convenience standards to the recycling of pressurized cylinders by maintaining many of the existing requirements in OAR 340-090-0640, but with some notable changes:

- a. Require the PRO to provide for collection of pressurized cylinders only at an “existing recycling depot or drop off center”, with no additional, population- or geography-based quotas for collection points. For purposes of pressurized cylinder collection, narrow the definition of “existing recycling depot or drop off center” to only include a site that operates under a valid solid waste permit issued by the DEQ, or a facility operated by or at the direction of a Tribal government. Do not require the PRO to offer collection at other “existing recycling depots or drop off centers”, such as neighborhood or community recycling centers not otherwise located at a permitted disposal site or operated by a Tribal government.
- b. Require the producer responsibility organization to pay for costs of recycling pressurized cylinders, including:
 - i. Costs of acceptance and pre-processing, which include costs associated with *receiving* all pressurized cylinders (whether ultimately recycled or not), *assessing* cylinders so as to determine their recyclability, *separating* cylinders to be recycled from cylinders not to be recycled (if any), *consolidating, storing, and transporting* cylinders prior to final delivery to a recycler, *preparing* cylinders to be recycled (including puncturing cylinders and evacuating contents), and *customary administrative and overhead costs*.
 - ii. Costs of final transportation to a recycler, consistent with Oregon Administrative Rule 340-090-0770 and 340-090-0780.
 - iii. Cost of acceptance of the material at a responsible end market, if any.
- c. Limit the producer responsibility organization’s financial responsibility to the lesser of a) actual costs to manage, or, b) for “costs of acceptance of the material at a responsible end market” (iii, above) the per-ton practicability threshold contained in OAR 340-090-0670(5)(c).
- d. In cases where a collection system manages pressurized cylinders using more than one recycling pathway (e.g., empty cylinders are punctured on site and sent to a local metal recycler; non-empty cylinders are sent to a hazardous waste treatment facility that evacuates the contents and recycles the metal), allow the producer responsibility organization to differentiate between management pathways for the purposes of determining compensation (so that the higher per-ton rate for the more expensive pathway is only applied to containers that follow that pathway).

3. Amend the performance standards for pressurized cylinders to remove the requirement that all pressurized cylinders be processed by a regulated hazardous waste treatment, storage and disposal facility.

Outcomes of proposed additions

- Operations: Less extensive recycling of pressurized cylinders and less financial support for existing collection programs when compared to current rule, which may not be “practicable”. Compared to a pre-RMA baseline, concept will lower costs to local governments and facility operators, improve recycling of steel containers, and in some communities may support a viable alternative to landfill disposal or improper recycling of unpunctured cylinders.
- Fiscal, economic, and equity impacts: Will reduce costs to participating local governments and other service providers (relative to a pre-RMA baseline). Cost to the producer responsibility organization will be reduced relative to the existing rule. Per ORS 459A.884(1), the PRO should recover these costs from producers of pressurized cylinders, not the general population of producers.

Committee discussion questions

1. Will the proposed rule additions deliver outcomes as indicated above?

2. Do committee members support this proposal or recommend consideration of a different approach?

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