Fact Sheet

From deposit to return: How deposit systems achieve high performance

December 2025

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Introduction

Deposit return systems (DRS) are gaining ground globally as governments look to improve recycling outcomes and meet circular economy goals. As of December 2025, more than 396 million people live in regions with active systems, and by the end of 2026 that number is expected to grow by another 169 million as more countries including Türkiye, Greece, Spain, Portugal, and Singapore launch new programmes. The EU's Packaging and Packaging Waste Regulation (PPWR) will further accelerate adoption, requiring Member States to achieve 90% collection for beverage cans and bottles by 2029, a target that in practice necessitates DRS.

This momentum reflects the proven performance of deposit systems. Data from DRS worldwide show that well-designed systems routinely achieve 90% or higher return rates, significantly higher than the collection rates achieved in kerbside collection programmes. Evidence from the United States (US) underscores this advantage: nine of the ten states with the highest recycling rates have deposit systems, which together account for nearly half of all packaging recycled nationally.

Yet not all systems achieve the same results. Performance depends on the details: deposit value, container coverage, and convenience of return all play a critical role in overall system outcomes. The following case studies examine these design factors and illustrate how targeted improvements can translate into higher collection rates.

Case study #1: Alberta, Canada

In 2008, Alberta raised its beverage container deposits to CAD$0.10 (€0.06) (up from $0.05 [€0.03]) for containers 1L and under, and $0.25 (€0.15) (up from $0.20 [€0.12]) for those over 1L. Around the same time, the programme expanded its scope: in 2009, milk containers were added, making Alberta the first North American jurisdiction to include milk in a DRS, and beer cans, previously managed under a different programme, were rolled into the Alberta Beverage Container Recycling Corporation (ABCRC) system. These combined changes helped drive a rapid increase in the overall collection rate, from 70% in 2007 to 81% in 2009, 82% in 2010, and 83% in 2011.

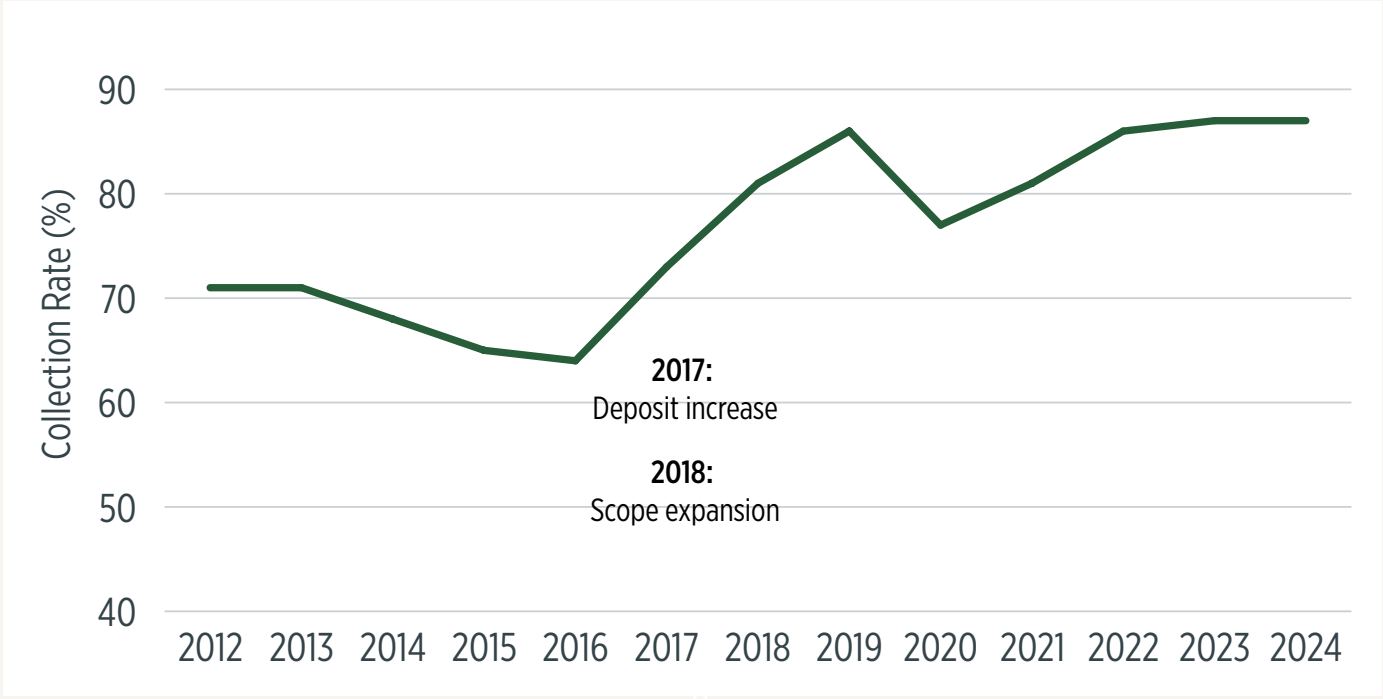
Case study #2: Norway

Norway operates one of the world's most established DRS, with consistently high collection rates for both PET and metal containers. In September 2018, the country increased its deposit values, from NOK 1 to NOK 2 for small containers and from NOK 2.50 to NOK 3 for large containers, to strengthen system incentives.

Collection-rate data show a clear stabilisation and gradual improvement following the increase. After a few years of decline (2014–2017), both PET and metal return rates began to rise again in 2018–2019, reaching more than 92% for all materials by 2020 and remaining above 91% through 2024. While Norway was already a high performer, the higher deposit helped reinforce participation and maintain collection rates at the top end of global benchmarks.

Case study #3: Oregon, US

In 2017, Oregon doubled the deposit from USD$0.05 (€0.04) to $0.10 (€0.09), followed by a major expansion in 2018 to include a wider range of beverages (energy and sports drinks, coffee and tea drinks, ready-to-drink cocktail mixers, kombucha, hard cider, juice, protein drinks, and marijuana beverages). These two reforms, taken together, had an immediate impact: collection rates jumped from 64–65% in the years prior to 73% by the end of 2017, 81% in 2018, and 86% in 2019. As of 2024, Oregon remains the top-performing US deposit system, achieving an overall collection rate of 87%.



Case study #4: Connecticut, US

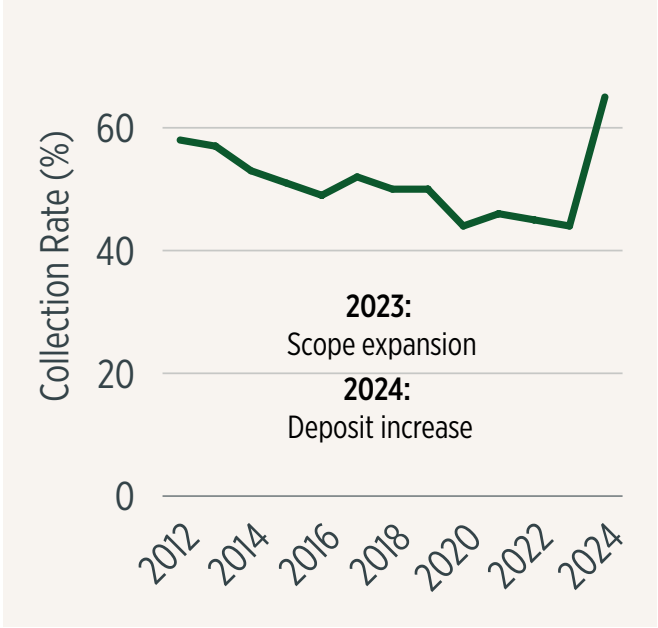
Connecticut's DRS has historically had one of the lowest collection rates in the US. In January 2023, the state implemented a major expansion under SB 1037, adding non-carbonated beverages and hard cider to the programme, and eliminating the exemption on HDPE containers. Building on this, in January 2024 the state increased the deposit from USD$0.05 (€0.04) to $0.10 (€0.09), doubling the financial incentive for consumers to return containers.

The impact on performance was immediate and substantial. Collection rates rose from 44% in 2023 to 65% in 2024, a 21-point year-over-year increase, and the highest rate ever recorded in the programme's history. In Q2 2025, Connecticut's Department of Energy and Environmental Protection (DEEP) reported that 440.5 million containers were collected, corresponding to a quarterly collection rate of 87%, up from 57% in Q2 2024.

This increase contrasts sharply with trends in other states over the same period. Many jurisdictions saw modest declines of 1–3% in collection rates, while New York saw a 1% increase and California and Oregon remained largely static. Some have speculated that Connecticut's gains could be influenced by cross-border returns, but there is no hard evidence of widespread fraud. Instead, the data strongly suggest that the com-

-bination of expanded access, broader programme scope, and a higher deposit has been the primary driver of the state's record-breaking collection rates.

Higher deposits and expanded scope lifted Connecticut's collection rate by 21 percentage points within a year, from 44% in 2023 to 65% in 2024



Case study #5: Germany

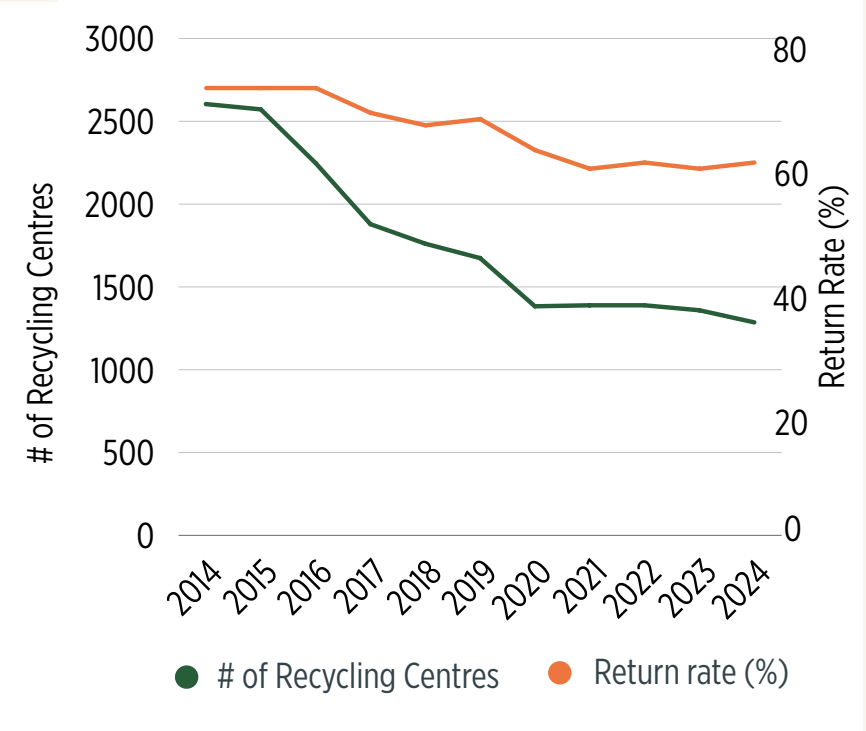
Germany's DRS consistently delivers one of the highest collection rates in the world, reaching an estimated 98% in 2024. A key driver is its high deposit level, set at €0.25 per container (the highest globally), which provides a strong incentive for consumers to return their bottles and cans. Convenience reinforces this incentive. Germany's retail take-back obligations ensure that consumers can return containers at approximately 130,000 redemption locations nationwide, about one point for every 640 residents. This exceptionally dense, accessible network, combined with the strong financial signal of a high deposit, underpins Germany's world-leading performance.

Case study #6 : California, US

California serves as a cautionary example of how an inconvenient redemption network can weaken the effectiveness of a DRS. The state operates a hybrid redemption model, where beverage containers can be returned either to redemption centres or to some retail stores. However, unlike most high-performing systems, retailers have no universal take-back obligation. They are only required to accept empties if they are located outside a designated "convenience zone," an area without a nearby redemption centre.

For many years, even this requirement was loosely enforced. Until 1 January 2025, retailers could opt out entirely by paying a USD$100 (€86) per day fee to the system operator, a loophole that left large portions of the population without practical access to redemption. As a result, the number of recycling centres declined dramatically over the last decade, from 2,604 in 2014 to less than 1,300 in 2024. This translates to roughly one collection point for every 30,000 residents, far below the accessibility standard seen in most high-performing DRS. As the Figure below illustrates, this loss of access coincided with a sharp drop in collection rates, from 72% in 2014 to around 60% in 2024 (*excluding containers recovered via kerbside and drop-off programmes*).

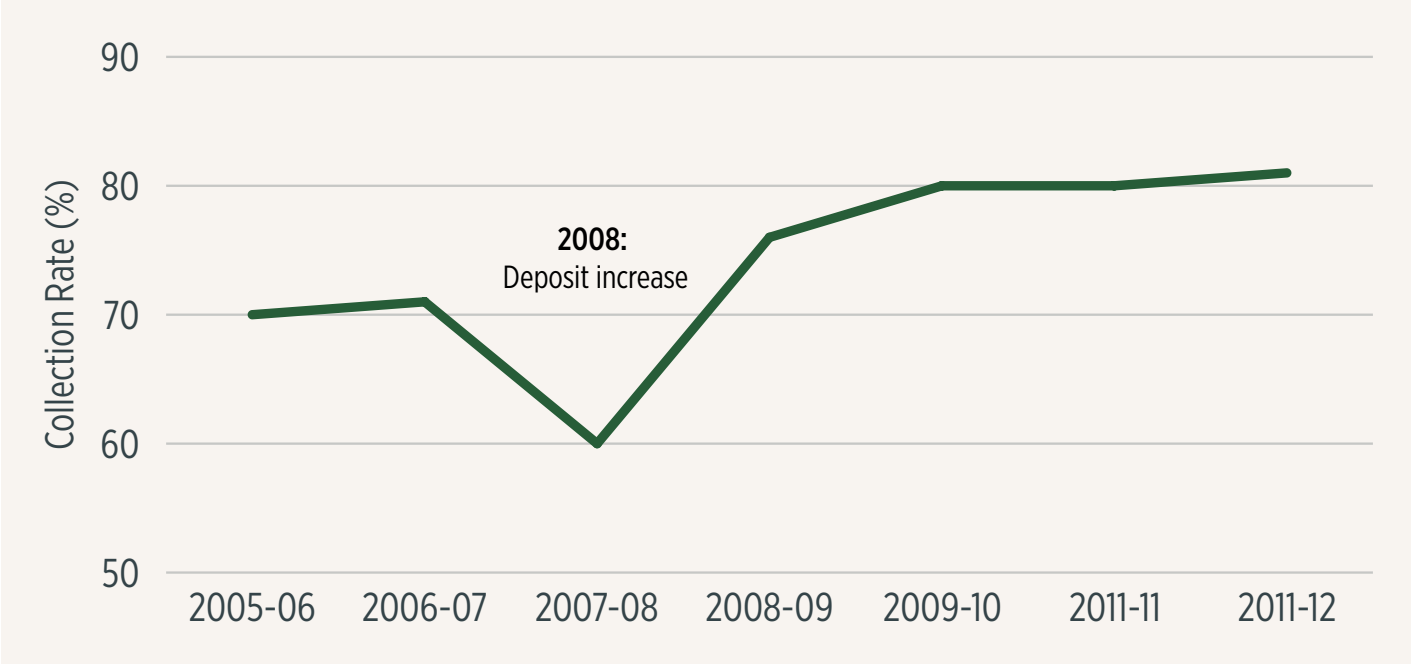
While residents in areas without a recycling centre are technically entitled to return containers to retailers, awareness and enforcement remain low. Few stores advertise this option, and compliance is inconsistent; a random audit in the Los Angeles area by Consumer Watchdog found that two-thirds of retailers refused to take returns.



California has since introduced reforms aimed at improving access. As of 2025, retailers can no longer pay to avoid take-back requirements. Those unwilling to redeem containers in-store must instead join new 'dealer cooperatives,' which are collectively operated redemption sites intended to fill service gaps in underserved areas. However, small stores (under 5,000 square feet or with less than USD$1.5 million in annual sales) remain exempt, leaving questions about whether these measures will be sufficient to restore convenience and reverse the downward trend in return performance.

Case study #7 : South Australia, Australia

In September 2008, the South Australian government doubled the deposit on all eligible containers from AUD$0.05 (€0.03) to $0.10 (€0.06). This single policy change led to a notable increase in collection rates, rising from 70% prior to the increase to 76% within just one year. By 2009-10, the collection rate had reached 80%.



Key takeaway

Deposit systems remain the most effective mechanism for recovering beverage containers at scale, consistently outperforming kerbside collection systems in both quantity and quality of material returned. Evidence from across jurisdictions shows that three design factors (meaningful deposit values, convenient access to return points, and broad programme scope) are central to achieving high collection rates and strong public participation. As governments seek to meet ambitious circular economy targets in the coming years, these case studies offer a clear blueprint: make participation easy, set the right incentives, and capture as many containers as possible.

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