



Cash For Containers

Zero Waste Scotland (ZWS) has announced funding to pilot deposit and return and reverse-vending systems. **Marion Croy**, ZWS project manager looks at the impact this could have on recycling rates nationwide

Zero Waste Scotland (ZWS) has announced a £900 000 fund to pilot a number of deposit and return and reverse-vending systems that will help inform the Scottish Government on the possible impacts of introducing similar schemes nationally. But what potential could they have on domestic recycling rates?

The Scottish Government's vision for a zero waste society is set out in the Zero Waste Plan. The Plan sets out new targets that will apply to all waste, including a 70 percent target for recycling all waste by 2025. The annual recycling and composting rate for local authority collected waste in Scotland in 2010/11 was 38 percent, hence the need to identify options to increase recycling rates. To a varying extent, many European countries, including Scotland, have already implemented kerbside collection systems to increase recycling, but many of these systems do not achieve particularly high proportions of returned empty packaging (collection rates), high recycling rates or good quality of materials.

To improve the recycling of packaging in both qualitative

and quantitative terms, some countries have introduced – or are considering introducing – deposit return systems (DRS) for single-use container packaging, in addition to the existing kerbside collection or bring systems. There is strong evidence that DRS produces high recycling rates (typically 80 percent plus) and high quality material that can be used for closed loop recycling.

The Scottish Government, in its election manifesto (2011), committed to “pilot a deposit return/reverse vending system for single use plastic, glass and aluminium containers and work with partners in the retail sector to explore options.” The deposit return/reverse vending systems are intended primarily to increase recycling of single use containers and at the same time increase the quality of this material, to support the development of the reprocessing infrastructure and industry in Scotland.

As the organisation set up to support the delivery of the Scottish Government's zero waste priorities, Zero Waste Scotland has been asked to manage and evaluate the impact of a number of pilot projects in this area.

Learning from International Experience

WITHIN A European context, 10 countries currently operate a DRS and a further seven are considering options to pilot systems, so there are good examples to draw on and lessons to be learned from their experiences.

Introducing changes to collection systems is sometimes met with concerns that deposit systems are harmful to the operation of kerbside or bring systems (for example, if these systems can no longer be operated economically due to the withdrawal of material that is economically attractive) and that this may lead to an increase in the fees for the packaging producers or even in the breakdown of these systems.

Germany's experience does not confirm these fears, however. A deposit system for single-use beverage packaging was introduced in Germany in 2003, and is run in parallel to the green dot system (kerbside collections or bring sites) that has existed since 1991. The German green dot system continues to exist in its original collection structure eight years after introducing the deposit system, although competition has intensified significantly in this segment as a result of the increase in the number of reprocessing providers. Drawing on the German experience, the single-use deposit system is aimed at the consumption of drinks away from home. Consequently beverage packaging that would never be collected in a kerbside system is collected, so the two systems can coexist satisfactorily.

Potentially, the proportion of empty packaging returned (collection rates) in deposit systems for single-use beverage containers can be significantly higher than in green dot systems. In Germany, for example, 98.5 percent of the PET bottles bearing a deposit are collected in the deposit system and recycled, while only 25-31 percent of the PET bottles that do not bear a deposit are collected and subsequently recycled in the German green dot system. This is a similar figure to Scotland's current recycling rate of 26 percent for PET bottles, so the opportunity to meet Scotland's ambitious recycling targets through DRS pilot projects is certainly worth exploring.

Experience of effective DRS is not just limited to Europe. For three decades South Australia had been the only jurisdiction, within Australia, where a deposit is paid on all drinks bottles. That changed this year when the Northern Territory introduced a 10¢ deposit scheme. The Tasmanian parliament has also voted in support of a scheme while governments in Western Australia and Victoria increasingly support the idea. South Australia is among the world leaders for beverage container recovery, achieving 85 percent of glass containers, 84 percent of cans and 74 percent of PET bottles, and materials presented for recycling are of the highest quality in Australia.

Last year, the federal government of Australia released a "consultation regulation impact statement" on how best to deal with low rates of recycling, especially of glass, plastic and steel and reduce the amount of litter packaging creates. When state and federal environment ministers meet in August they are expected to pick one or more options, including a container deposit scheme, and order further comprehensive testing on their impact before deciding which, if any, they will adopt.

Evaluating and Monitoring Trials

ZERO WASTE Scotland believes that there should be an evidence-based approach to policy making so we are ready to support Scottish Government with establishing the evidence base for how these kinds of schemes can perform in Scotland, as well as taking into account learning from similar schemes internationally.

Zero Waste Scotland has announced a £900 000 programme to take forward a number of pilot projects, starting in 2012, to test whether DRS and reverse vending can increase materials recycling whilst also increasing the value of material captured, in predominantly "away from home" scenarios. It is not the intention of the trials to divert materials from existing recycling systems, rather that the trials will aim to capture materials that currently fall outside these systems, and to divert materials from landfill. We will also measure this.

Independent evaluation of trials will measure consumer behaviour and, most importantly, public acceptability of the trial projects, the volume and quality of material captured, impacts on littering and other community benefits. Results of the trials are expected around September 2013. [CIWM](#)

References

1. Pricewaterhouse Coopers/Deutsche Umwelthilfe (2011). *Reuse and Recycling Systems for Selected Beverage Packaging From a Sustainability Perspective*. Also reference 5
2. Di Martin (2011), *Money for Empties* (ABC radio transmission); Campaign to Protect Rural England (2010), *Have we got the bottle? Implementing a deposit refund scheme in the UK*; Oakdene Hollins Research and Consulting (2010), *Deposit Return Systems for Packaging: Applying International Experience to the UK*; WRAP (2008), *Refillable glass beverage container systems in the UK – Identification and quantification of the barriers and opportunities for the wider adoption of refillable glass beverage containers in the UK*.
3. Deposit return systems charge an additional fee on each container which is purchased. The consumer can then have this deposit refunded at dedicated return points when the empty container is deposited back to the system. This provides a strong economic incentive for waste materials (which have been discarded) to be returned, source-segregated, to locations which ultimately result in them being recycled.
4. Reverse vending systems allow the take-back of containers (which have had no deposit levied) in exchange for a reward. Equipment used to provide this facility is usually an automated reverse vending machine (RVM), which can, depending on its level of sophistication, recognise different container types and materials, source separate them, compact materials to increase storage, and dispense a reward to the facilities user.

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