



# Plastic fantastic: how lotteries could revolutionise recycling

If recycling was run as a lottery scheme, would that encourage more people to recycle than a container refund scheme? The University of Queensland's Ian MacKenzie says we should take the gamble.

By Ian MacKenzie

Tuesday 28 March 2017

Twitter Facebook LinkedIn RSS



Research suggests that contests can be easily designed to incite higher levels of effort than piece-rate rewards, and this could be used to improve recycling rates. Image: Rob Sinclair, CC BY-SA 2.0

In July 2018, Queensland will launch a [container refund scheme](#), in a bid to boost recycling and reduce litter and pollution.

It will join [South Australia](#), the [Northern Territory](#), [New South Wales](#) (later this year) and [other places around the world](#) in offering a small refund on all eligible drink containers deposited at designated collection points.

WASTE

Green groups hold their bottle on deposit scheme

Read now

Many of the details have been [decided already](#), including the size of the refund: 10c a bottle.

But is Queensland missing a trick here? Economic evidence suggests that the scheme could be cheaper to run, and boost recycling more, if it was run as a lottery instead, with every recycled bottle representing a “ticket” to a prize draw.

## In it to win it

Boosting recycling relies on people changing their behaviour. One of the strongest drivers of behavioural change is economics; that’s why container refund schemes exist at all.

But economists also know that the type and size of this financial reward can have a large bearing on people’s behaviour. For many decades, researchers have focused on working out which rewards prompt the most effort. One key question is whether participants respond better to small, reliable rewards, or to being offered a chance of a big windfall.

Research suggests that contests can be easily designed to incite higher levels of effort than the more humdrum piece-rate rewards. Such contests have already been shown to work well in other environmental contexts, such as [allocating pollution permits to companies](#).

Instead of getting 10c per container, Queenslanders could instead be given an electronic ticket for each container recycled. These tickets – which could perhaps be linked to a householder’s council rates account or other personal identifier – could then be entered into a quarterly lottery. The state government would need to decide on the size and number of prizes, as well as the eligibility rules.



## Eyes on the prize

Several benefits are clear. First, there is evidence that it is very easy to incite [more recycling](#) using a contest approach.

Lotteries are also more flexible – the prizes can be adjusted relatively easily to increase or decrease participation. If recycling rates are too low, the prize value in the next lottery could be increased. In contrast, adjusting the 10c container refund would be far more difficult once it has already been set up.

The scheme might end up costing less overall, too. As the lottery may have only one prize (or a few), the administrative costs would be minimal compared with a per-unit payment. Depending on the size and number of the prizes, the prize fund could also be smaller than the cost of paying millions of 10c refunds.

Finally, the government can control the geographical placement of container points. This would allow it to influence the number of participants and also the ability to focus on citizens that may have certain preferences for recycling, or risk preferences that enjoy lottery contests. Indeed, research shows that [risk attitudes](#) and citizens’ [preferences](#) have an important impact on contest outcomes.

## Lucky chance

A poorly designed lottery might conceivably work too well – recycling rates might become so high that they overwhelm the infrastructure or cause a glut of recycled materials. This has been shown to be possible when lottery-style contests are used in other environmental regulatory [contexts](#). For example, contests that use pollution reduction as a lottery criterion can be too successful - driving down emissions hugely but at a significant cost to economic output.

Choosing the right-sized prize is crucial. If it’s too small, few people will be enticed to change their behaviour and take part. But if it’s too big, many people might stop using their kerbside recycling facilities altogether, “saving up” their recycling for the lottery. This would present a problem of “additionality”: the scheme would be capturing lots of bottles that would have been recycled anyway.

These are mere details, and the challenges of getting it right shouldn’t stop the Queensland government seriously considering giving the idea a go. It might make recycling a whole lot more exciting.

*Ian A. MacKenzie is Senior Lecturer in Economics at The University of Queensland. This article was originally published on The Conversation.*

Share this story



Topics: Carbon & Climate, Cities, Lifestyle, Waste

Regions: Australia, Global

Tags: plastic, recycling, waste

0 Comments Eco-Business Login

Recommend Share Sort by Best

Start the discussion...

Be the first to comment.

Subscribe Add Disqus to your site Privacy

DISQUS

## Related Stories

POLICY & FINANCE

Legal challenge threatens future of recycling plan

13 Sep 2011 News

POLICY & FINANCE

Efficient bottle plan pitched to councils

2 Apr 2013 News

WASTE

Green group split on cash for cans

11 Oct 2013 News

WASTE

Recycling rewarded in Sydney

25 Jun 2014 News

## Subscribe

Subscribe to our newsletters

The best Eco-Business stories, jobs and events delivered to your inbox – daily or weekly.

Subscribe

Follow us on facebook

Read our stories and participate in the Eco-Business facebook group.

Follow

Advertisement

Ethical CORPORATION #RBSEU

16th Responsible Business Summit Europe 2017

7-8 June | Hilton Tower Bridge

+500 brands, including:

Allianz HEINEKEN ING Unilever DELL PEPSICO

## Supporting Organisations

Sindicatum sustainable resources

ASIA PLANTATION CAPITAL

Thai Union

AlkoNobel

Eco-Business

Back to top

Asia Pacific’s sustainable business community

## Sections

Home  
News  
Opinion  
Videos  
Events  
Jobs  
Press Releases  
Research  
Publications  
Industry Spotlight  
Feature Series  
Special Reports  
A-Z Tags

## Subscribe

Newsletter  
Facebook  
Twitter  
LinkedIn  
RSS

## About

About Us  
Our Team  
Contributors  
Contact Us  
Supporting Organisations

## Policy

Op-ed Guidelines  
Press Release Guidelines  
Privacy Policy