unpackaging extended producer responsibility

Achieving a circular economy in the United Kingdom through a world-leading producer-responsibility system for products and packaging
What is extended producer responsibility (EPR)?

“In the United Kingdom, we have extended producer responsibility schemes for cars, for small batteries, for waste electronics and for packaging items. Extended producer responsibility schemes are widely used in Europe and, working alongside more traditional recycling schemes, have contributed to significant increases in the recycling rates achieved. SUEZ recycling and recovery UK believes that extended producer responsibility, well designed and implemented, could significantly contribute to the long-term sustainability and circularity of the UK’s economy. Further, it should promote re-use and the removal of unnecessary items.

The UK government is considering changes to the extended producer responsibility scheme for packaging and potentially introducing new items such as car tyres or mattresses. A common misconception is that extended producer responsibility schemes are funded by producers of the target products. Although it is correct that they direct and organise the payments either themselves or through compliance / consolidator schemes, the actual costs are most often recovered from consumers, through an increase in the cost of purchase.

When the UK signed the EU circular economy package, it committed to an extended producer responsibility regime that sought to recover at least 80% of the full net costs associated with dealing with the obligated products, which is often referred to as full cost recovery (FCR). If government was to seek near 100% full cost recovery for the obligated items, then this may also contribute towards the costs of dealing with litter and residual waste treatment.”

— Organisation for Economic Co-operation and Development (OECD)
Governments considering extended producer responsibility will often attempt to set a level of cost, to producers, of placing target products on the market – a placed on the market (POM) cost – which ensures recycling is less expensive than the cost of the charge itself, while also setting targets for recycling which allow progressive and measurable delivery. If the placed on the market cost is insufficient, then this can make non-compliance with the targets ‘cheaper’ than compliance. Placed on the market costs should be proportional to the environmental burden of the products to which they apply, often applied through product groupings rather than for individual items.

Designing an extended producer responsibility scheme that is efficient in both cost and delivery, and which therefore minimised passed-on cost to consumers, is essential. We also believe that consumers should be given simple on-packaging information, so they can make informed choices about the sustainability of the things they purchase. Furthermore, we believe that the design of the extended producer responsibility scheme should allow it to expand as necessary, so that the associated infrastructure and administrative burden can be shared, rather than simply repeated through multiple individual schemes.

Ensuring that robust evidence can be easily gathered, and used to both measure performance and prevent fraud, is vital for a successful scheme. A well-designed scheme should make successes or failures transparent, which will deliver the respective rewards or penalties for the producers involved.

For a number of years now, SUEZ has worked with representatives from organisations spanning the economic value chain, from large-scale producers, to packaging manufacturers, local authorities, waste management companies, consultants and economists. Using the insight gathered from these discussions, alongside the first-hand experience of extended producer responsibility systems in other markets from within our global group, we present the fundamental principles which we believe would place an extended producer responsibility regime for the UK among the best in the world.
The principles

What should an ideal extended producer responsibility system aim to achieve?

1. More sustainable design

Extended producer responsibility should influence product and packaging designers to reduce overall raw material use and unnecessary items, to make their designs more recyclable, repairable or reusable where possible, and promote greater usage of secondary resources. Importantly, extended producer responsibility should ensure that the level of environmental burden designed into a product is properly reflected in its cost when placed on the market.

2. Enhanced brand equity

The system should have sufficient flexibility to allow brands and product owners to differentiate from their competitors on environmental performance and should reward those who seek to excel in this area.

3. A level playing field

Obligations under extended producer responsibility should apply to all companies trading in the UK market, regardless of size, country of origin or distribution channel. An extended producer responsibility system should be designed to cover all materials and products placed on the market to minimise administrative burden and maximise efficiency. It should also cover the whole of the UK, not just England. All products, regardless of origin, should meet minimum sustainable design standards in the UK.

4. Informed, empowered consumers

Extended producer responsibility should empower consumers to make informed choices about the products they buy, through uniform sustainability labelling for example. This will help consumers to minimise personal costs and contribute to environmental protection. Consumer communications campaigns should be co-ordinated nationally, but retain sufficient flexibility to be effectively deployed on a local basis.

5. A competitive marketplace

Any extended producer responsibility system should be designed to promote competition at all levels in the value chain and must avoid creating anti-competitive structures or activities.

6. Innovation

A well-designed extended producer responsibility regime should foster innovation in materials, systems and product design, but must also make provision for the transition period and impacts while introducing new processes, products and changes to the market.
7 Simplicity for all

Processes for placing materials on the market, harvesting them from the consumer at the end of their life and making them into new things should be designed to work with, and complement, existing systems where possible. A well-designed scheme would simplify processes where change is necessary.

8 Minimal consumer cost

Consumers will ultimately pay for extended producer responsibility systems in the cost of the products they buy, so extended producer responsibility systems must be designed to deliver the necessary outcomes for the least cost.

9 A system free from crime

It is important that new extended producer responsibility systems are not susceptible to fraud and other forms of criminality. Systems should be designed with clear standards for operators, appropriate barriers to entry, and robust processes for collecting and auditing data.

10 Rewards and penalties

To incentivise the value chain, it is important that extended producer responsibility systems create a competitive differential between those that succeed in meeting environmental goals and those that don’t. The governance of the system should ensure that the cost of failure is borne by the obligated organisations responsible and not hidden or spread to others.
How does extended producer responsibility work in practice?

This graphic shows how extended producer responsibility might work in practice. This starts when base materials are used in manufacture and products are placed on the market to be purchased by consumers – both individuals and businesses.

The consumers ultimately discard those products and packaging materials, at which point they become waste material which must be recovered or treated. While local authorities have primary responsibility for collecting household waste, there are over 100,000 licensed private waste carriers who may collect from households, on behalf of local authorities, or from businesses across the country. In addition to kerbside collections, there are a myriad of collection methods – from bring-banks and household waste recycling centres, new-for-old exchange schemes, charity collections and, more recently, deposit return schemes (DRS).

Once the material has been collected, it is often consolidated at one of just a few hundred sorting facilities, where it undergoes primary sorting into separate material streams – like metals, fibres, plastic polymers and glass. Once the individual materials have been sorted, they are sold to reprocessors who convert them into a secondary resource, which has a specification set by the manufacturers. The manufacturers purchase the secondary resources and make them into new products and packaging, thereby returning them to the consumer to start the cycle once more.

We have recorded on this graphic the main participants, the material flows, where evidence for an effective extended producer responsibility scheme could be collected at each stage and where value or cost occurs.

Placed on market fee / deposit should be equal to or higher than the costs involved in the management of those materials in this system. The net cost will be reduced by the commodity value of the secondary resources recovered.
Unpackaging extended producer responsibility

Base materials used for product manufacture

Obligated products place on the market

Retailers / pack fillers – obligated parties
Includes all materials sold from UK outlets, international sourced imports and internet sales

Materials placed to market
Items purchased
Optional evidence – point of sale location for devolved authority use

Consumers purchase products

The ‘placed on market’ fee is included in the purchase price

Consumers discard the products

To recycling
To general waste
To litter

Waste is collected and delivered for sorting and bulking up

Cost of collection and management

Cost of litter picking and management

Cost of disposal – generally energy-from-waste or landfill

Cost of sorting and some contamination removal

100 sorting facilities
200–500 appropriate simple sorting and bulking facilities

Cost of refining / reprocessing materials into secondary resources – in UK or abroad

Weight of products produced
Product specification achieved

Value of the resource made available to reuse in new products

Other products

The more sustainable products (those with more life or recycled materials in them or more practically recyclable) have a lower fee.

The more material recycled, the more secondary resources made and if used for new obligated products, the lower the placed on market cost.

Up to 440 local authorities
100,000+ waste carriers
24 million households
5.7 million SME businesses
0.1 million corporate businesses

Weight of materials sorted
Purity of sorted materials

Weight of materials
Composition of materials

= 50 UK-based waste refiners / reprocessors
Numerous overseas waste reprocessors

Recycled secondary resources used in new products

Other products

The more material recycled, the more secondary resources made and if used for new obligated products, the lower the placed on market cost.

The more sustainable products (those with more life or recycled materials in them or more practically recyclable) have a lower fee.
This document was authored by Stuart Hayward-Higham, Technical Development Director at SUEZ recycling and recovery UK. We would like to thank all of those who have participated in recent workshops for their contributions, which have helped inform the content of this document.