TECHNOLOGY

A chance to drive haz waste policy

Waste from EfW plant exhaust gases can be difficult to deal with. GRAEME RUMBOL says the Government has an opportunity to legislate against sending it needlessly to landfill

The proliferation of energy-from-waste (EfW) power plants is making a significant contribution to the UK's efforts to end its reliance on harmful fossil fuels. But while EfW plants provide a solution to municipal waste, they also produce a low amount of hazardous waste in the form of air pollution control residue (APCr). Despite numerous solutions existing that process and reuse APCr effectively, most is sent to landfill.

APCr levels are rising and necessarily so. EfW has a key role to play in the UK's energy mix, and provides a productive use for millions of tonnes of municipal waste each year. It is therefore positive that more plants are coming online.

Typically, 2-5% of the mass of waste incinerated becomes APCr. Currently around 300,000 tonnes is generated annually, but the figure is expected to rise to 500,000 tonnes in the next four or five years, making APCr one of the UK's fastest growing hazardous waste streams. So we need a long-term sustainable solution to process it.

APCr is classified as an absolute hazardous waste in the *European Waste Catalogue* because of its high alkalinity, which is caused by the addition of scrubbing agents such as lime to the abatement process. Fortunately, there are a number of treatment solutions, many of which have been developed here in the UK. But most of our APCr is sent to landfill – why?

The EU's 2008 Waste Directive set out stringent waste acceptance criteria intended to make this harmful practice illegal. However, at the time, there was a widespread view in Whitehall and the industry that there was no alternative, so the Government introduced so-called 3xWAC derogations. These allow designated landfill sites to accept waste with up to three times the permitted waste acceptance criteria (WAC) limits for specific waste parameters set by the Directive.

It was intended to be a temporary solution and, since 2008, numerous Government papers have committed to removing 3xWAC, but they remain in place today.

The most promising move came in 2014 when the Environment Agency announced a consultation into WAC derogations with the intention of removing them. But it was soon deemed that removing them was more complex than initially thought, and Defra launched a review. This is understandable. Even in the waste industry, WAC derogations are a niche subject. In particular, there was a lack of understanding of landfill alternatives.

Two years later, Defra's decision is expected imminently, and it presents one of the biggest opportunities to drive forward hazardous waste policy, set a precedent and support a vision I think we all share: for a future where waste is not needlessly landfilled.

Tetronics' technology, for example, uses plasma – essentially synthetic lightning – to treat APCr thermally, transforming it into a glass-like material. This is classified as inert and is safe for use in commercial applications such as a building aggregate.

In the past, landfill was often the cheaper option, but companies like ours have invested in research and development to bring costs down and compete with, or even beat, landfill fees. Given the delays with a decision about WAC derogations, many waste managers have understandably delayed investment decisions until they have a clearer picture of what will happen. If WAC derogations are removed, it will unlock significant investment and give a massive boost to the industry.

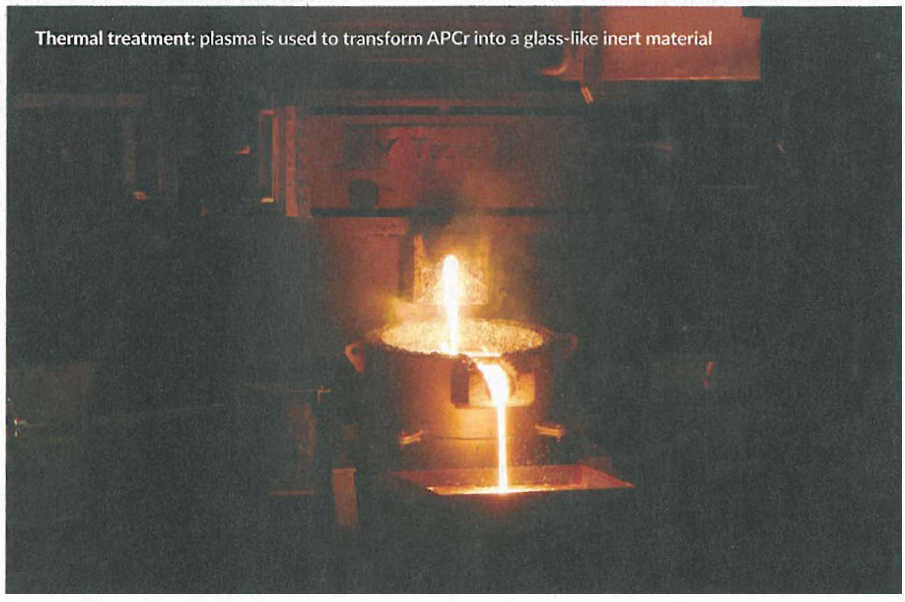
> **APCr is one of the UK's fastest growing hazardous waste streams, so we need a long-term sustainable solution to process it"**

As well as the economic effect, the environmental benefits would be huge. With the infrastructure in place, an estimated half a million tonnes of hazardous waste could be diverted from landfill or long-term storage in salt mines every year. Vast amounts of harmful toxins would be removed from our environment.

The move would also improve the image of the EfW industry, which has come under criticism. By sending no waste to landfill and putting APCr to use as a source of recoverable materials, EfW plants can truly say they are an essential cog in the circular economy.

Industry has been consulted and delivered its case to Defra, which must now make a decision that could be a step backwards by allowing WAC derogations to continue – or transform our industry and take the UK closer to a future where waste is not needlessly landfilled.

Graeme Rumbol is chief executive of Tetronics International



Thermal treatment: plasma is used to transform APCr into a glass-like inert material