

# theaxionnewsletter

**WELCOME** to the latest edition of the Axion Newsletter. In this issue read articles about Axion's recommendations for optimising NIR sorters to achieve improved quality output and Axion's call for 'positive drivers' to boost WEEE recycling rates, drawing on lessons from the USA where Government procurement policy has made a significant impact.

## **NIR SORTERS SHOULD NOT BE TREATED AS 'BLACK BOXES'**

Near Infrared (NIR) sorters should not be treated as 'black boxes' that don't require attention. Their sophisticated technology must be optimised to maximise recycling yields and purities from household plastic packaging in the UK says Axion Director Roger Morton. Roger was addressing the recent Envirolink event 'The Role of MRFs in Modern Day Waste Management' held at Biffa Waste Services in Manchester.

Drawing on the results of research carried out by the company, Roger said that Material Recovery Facility (MRF) and Plastic Recovery Facility (PRF) operators should understand the process variables associated with NIR sorters and optimise these parameters to suit their particular operations.

Now available, the Near Infrared (NIR) good practice guidance for existing and potential recyclers (produced by Axion on behalf of WRAP [Waste and Resources Action Programme]) advises users to make the most of their NIR technology providers' knowledge to help improve recovery rates and quality of materials from their NIR sorting facilities.

The guidance is based on research undertaken last year at six sites to identify NIR good practice in the UK and mainland Europe. MRFs and PRFs should both be capable of achieving similar product purities when using NIR technology to sort plastic packaging. Polymer stream purities achieved by NIR sorters typically range from 80 to 95%. High performing and well-configured systems can

achieve over 95% purity.

In addition to MRF experts from across Europe, Roger Morton will be explaining NIR good practice and optimising techniques at the forthcoming Axion-sponsored event – **Designing, Building and Operating a Modern MRF, lessons from practical experience** - in Birmingham on May 25.

"NIR optical sorting technology is being used increasingly to separate plastic packaging and other plastic wastes by polymer type. This produces high quality materials that can substitute virgin material in the manufacture of new items," says Roger. "Effective and reliable NIR sorting operations are fundamental to achieving high purity segregated polymer streams, and ultimately maximum market value for products."

Axion Senior Engineer Simon Wilkinson will discuss sampling and analysis techniques, including sample size, frequency, methodology and analysing data to improve purity, yield and separation efficiency.

Roger added: "It is clear that the implementation of good practice can bring a wide range of benefits - in particular, improved quality and quantity of plastics that are recycled, which in turn supports the sustainability of UK plastics recycling operations."

Download the Near Infrared (NIR) good practice guidance from the WRAP website link [here](#)

Look out for further details of the 'Designing, Building and Operating a Modern MRF' event on 25th May and keep the date free!

## **WEEE RECYCLING REQUIRES 'POSITIVE DRIVERS'**

Positive procurement-based encouragement, rather than burdensome legislative enforcement, is the way forward to increase volumes of Waste Electronic and Electrical Equipment (WEEE) recycling across Europe, suggests Axion Polymers.

We believe that UK and European Governments could learn lessons from their USA counterparts, whose EPEAT (Electronic Products Environmental Assessment Tool) measuring system is having a greater impact on recycling levels over there. A large number of branded OEMs have already signed up to this system of product assessment.

"EPEAT is more of a positive driver to encourage more WEEE recycling in the USA," asserts Axion Director Keith Fregard. "A 'carrot rather than stick' approach is what's needed if we are to create the positive drivers that make products containing recycled content much more sustainable and attractive to potential purchasers.



## AXION CALLS FOR 'POSITIVE DRIVERS' TO BOOST WEEE RECYCLING

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It's a pulling-through approach to increasing recycling volumes that will optimise re-use and preservation of our valuable resources."

A listing of the large number of equipment manufacturers who have signed up to the EPEAT scheme can be seen at [www.epeat.net/Companies.aspx](http://www.epeat.net/Companies.aspx).

Calling for action, Keith says: "Axion would strongly encourage the UK Government to create and support a similar positive procurement policy for ALL government departments and right across the public sector. For example, imagine how much is spent on buying electronic equipment in the NHS, the MoD and local authorities and how this could impact recycling volumes?"

His comments came after speaking on Axion's latest material recovery techniques at the 10th International Electronics Recycling Congress IERC 2011 [www.icm.ch](http://www.icm.ch).

More than 450 experts from industry, authorities and academia attended the Salzburg event to share the latest information on the WEEE recycling business and the challenges it faces.

Echoing the viewpoints of several other key speakers, Keith highlighted the success of the EPEAT method, which uses various measures such as levels and sources of recycled plastic content, in determining a product's sustainable credentials. Government procurement bodies are encouraged to purchase the highest-rated products, such as printers or computers. In turn, this incentivises manufacturers to incorporate more WEEE-derived content in new goods.

"OEM producers focus on how products are scored positively as those with a top 'Gold' award are most likely to get purchased by big organisations," explains Keith. "It's an example of a 'carrot-type' approach to encouraging more WEEE recycling, rather than what we tend to do in Europe - which is too much legislation that is often difficult to enforce." Arguing against introducing any further red tape that would create further recycling barriers, Keith concludes: "The levels of small domestic appliances being recycled across Europe are still quite low when compared with the estimated arisings. Maybe a lesson we could learn is to use positive purchase-based methods of encouraging markets, rather than always just setting legally-enforceable target levels that everyone must achieve."

## AXION 'ART ATTACK' WINNERS



I-r Sam Bennion, Philip Rhodes, Patrick Rhodes & Olivia Bennion

Axion organised an in-house 'Art Attack' competition during the school holidays for children of staff members. The

young artists, aged between 4 and 16 years, were asked to create a piece of art using our recycled Axpoly products, to illustrate the theme 'Environment'.

The winning design was a joint effort, submitted by Patrick and Philip Rhodes. The children attended a short award ceremony where the boys were presented with a £50 cheque by Axion Director Roger Morton. Sam and Olivia Bennion were declared runners up and received Amazon vouchers from Roger.

Roger commented: "We were all very impressed with the children's artwork and they way in which they had thought about the theme. The winning entries showed great imagination and creative flair. The winning entries have been framed and they are on display in the Axion Polymers' boardroom. Look out for them next time you are there!"

Congratulations to the winners and thanks to all those who entered the competition.

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WINNER 2010

