



Packaging companies would be better served co-ordinating their response to growing sustainability requirements, rather than seeking to out-do each other

Food packagers feel sustainability pressure

Food packaging producers are feeling pressure from all sides to demonstrate their green credentials, but they should not use this as an excuse for adopting behaviours that may be detrimental to sustainability as a whole, delegates at the ACI European Food and Beverage Plastic Packaging Summit in Antwerp heard this week.

Hans van Bochove, head of Coca-Cola’s public policy centre and chairman of packaging association European, identified several layers of pressure driving brands to increase the sustainability of their plastic packaging. Pressure starts with consumers and non-governmental organisations that care about packaging and packaging waste, and develops with “demonisation” of plastics by the media, he said. Potential investors may also use sustainability criteria to judge investments, he added, and regulations – such as the EU’s Single Use Plastic (SUP) directive and proposed Packaging and Packaging Waste Regulations (PPWR) that set out requirements for recycled content in food packaging – then follow.

Companies need to “be mindful” to navigate through these various pressures and, while there can be a temptation for competing brands to try to out-do each other with increasingly ambitious targets, a more cohesive approach is likely to garner better results, van Bochove said. Solid targets from within the industry can help to lead legislation, he said, and effective legislation reduces the risk of individual countries “going their own way”. “It may be great to compete and try to ‘one-up’ each other, but a collaborative approach would be better,” agreed Hannah Drew from Aldi South Group.

A collaborative approach could also help small and medium-sized food and beverage companies that may otherwise struggle with the financial burden of compliance with regulations, delegates heard. Such companies are likely to have fewer resources than large corporations for dealing with sourcing the material necessary to comply with the SUP directive and PPWR without compromising safety. Demand outweighs supply of consumer-packaging-quality recyclates – particularly those that are approved for use in food-contact applications – in Europe, and prices remain significantly higher than for virgin polymers.

Get it sorted

Participants called on the EU to reduce the cost burden by enacting legislation to improve collection and sorting infrastructure, and support recycling capacity and technology, with chemical recycling seen as particularly important for the food packaging market. This “secondary legislation” to support progress towards the proposed headline targets is a focus for industry advocacy body Euric. It includes confirmation of the methods that will be allowed for certification of recycled content in packaging.

Harmonisation of rules such as those around labelling across Europe could also help, a number of participants said.

Overall, producers and sellers of packaging are still waiting to see what impact the new regulations will have on their business. PPWR has not yet been finalised and, as one participant said, “there is a joke in Brussels that the commission proposes a racehorse, once it has been through parliament it is a camel, and then finally it is a donkey”. But the summit demonstrated that the industry is very aware of the need to respond to the pressure to become more sustainable.

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MARKETS UPDATE – EUROPE

European rPET prices remain steady

The European rPET market is stable, albeit with subdued demand and limited deals and transactions completed. Market participants remain optimistic over the return of demand in the coming months, but many feel this may come slightly later than originally anticipated.

rPET bale prices have largely stayed within the previous ranges for completed deals. But some offers were heard at higher levels. These have been spurred by higher February Italian auction prices that were reported to average around €725/t for clear bale material.

There are mixed opinions on the reason for these higher prices in Italy. Some market participants feel that some restocking is taking place across the value chain as companies prepare for the peak season of packaging consumption over the summer. Others feel that the speculation about returning demand towards the end of the quarter has led to bale sellers trying to inflate prices.

In some cases, other countries in Europe have attempted to follow the Italian trend, for example in Poland, but these are yet to come to fruition as demand from the value chain remains subdued at present.

In the flake market, low virgin PET prices continue to draw demand away from recycled material, while in the sheet, strapping and fibre sectors there continues to be reports of an increase in the use of virgin material as a lower-cost alternative.

There have also been reports of competitively priced imports of flake material from southeast Asia and north Africa that are putting some pressure on European flake prices. Until virgin prices increase and the spread between recycled and virgin PET narrows, it is unlikely that demand for rPET flake will increase rapidly, and this is expected to continue to weigh on the market for most of this year. But the return of demand from the packaging sector over the peak summer season will add some strength.

European virgin PET producers have also gained some slight optimism after the industry formally submitted an anti-dumping complaint to the European Commission against Chinese PET at the start of the week. The commission is expected to launch an investigation in the coming weeks. An initial complaint was made at the end of last year, but it received a “soft no” from the commission as the data supplied did not provide enough information to show actual injury rather than the threat of injury. The European industry then compiled further data, including for the fourth quarter of 2022, which resulted in the commission accepting the request.

rPET market prices					€/t	
	Timing	Low	High	Midpoint	Δ	
Bale prices						
PET bottle colourless, del W Europe	17-Feb	550.00	700.00	625.00	+40.00	
PET bottle colourless, del N Europe	17-Feb	550.00	670.00	610.00	+10.00	
PET bottle colourless, del UK £/t	17-Feb	200.00	350.00	275.00	nc	
PET bottle colourless, del CEE	17-Feb	400.00	600.00	500.00	+25.00	
PET bottle colourless, yellow container, del Spain	1Q23	162.00	551.00	356.50	nc	
PET bottle colourless, municipal collection, del Spain	1Q23	94.00	260.00	177.00	nc	
Flake prices						
Bottle flake colourless, del NWE	17-Feb	1,275.00	1,550.00	1,412.50	-50.00	
Bottle flake colourless, del S Europe	17-Feb	1,250.00	1,500.00	1,375.00	-50.00	
Bottle flake colourless, del CEE	17-Feb	1,250.00	1,450.00	1,350.00	-50.00	
Bottle flake colourless, del UK £/t	17-Feb	850.00	950.00	900.00	+65.00	
Food grade pellet						
del NWE	17-Feb	1,900.00	2,100.00	2,000.00	-50.00	
del S Europe	17-Feb	1,850.00	2,000.00	1,925.00	-65.00	
del CEE	17-Feb	1,800.00	1,950.00	1,875.00	-50.00	

Reclaimer margins have remained slender from last year, so it could prove to be a difficult period for recyclers if bale prices increase and weakness in flake demand limits price increases for flake material. This is particularly important for recyclers that are not integrated through to food-grade pellet production.

Demand for food-grade pellet remains robust from the packaging sector, largely supported by fast-moving consumer good companies and beverage brands with sustainability targets. This has provided continued support for prices, although they have fallen slightly at the low end of the range owing to the overall subdued demand at this time of year. Market participants have reported that buyers continue to take lower contractual volumes at the moment and this is increasing spot availability in the short term, which is contributing to the slight decline at the lower end of the price range. There are also reports of some competitively priced imports of food-grade material, although volumes remain relatively small at this stage, but this would be a concern for some European food-grade producers if imports were to become more widespread.

MARKETS UPDATE – EUROPE

rHDPE BM prices fall

Prices for consumer packaging-quality rHDPE BM grades have fallen this month, with buyers baulking at the high premium to virgin HDPE.

Prices at the high end of the market have declined to €2,300/t, compared with €2,500/t at the end of 2022 and early this year.

The market remains fundamentally tight. Brands are continuing to work towards sustainability targets, and availability of material of the quality and consistency that they require for consumer packaging is still limited.

But the focus on costs has increased. This impacts demand for premium products that are more likely to include recycled content in packaging. Over the past six months it has been consistently reported that the high premium for rHDPE BM to virgin HDPE is making developers think more carefully about proposing new recycled packaging projects.

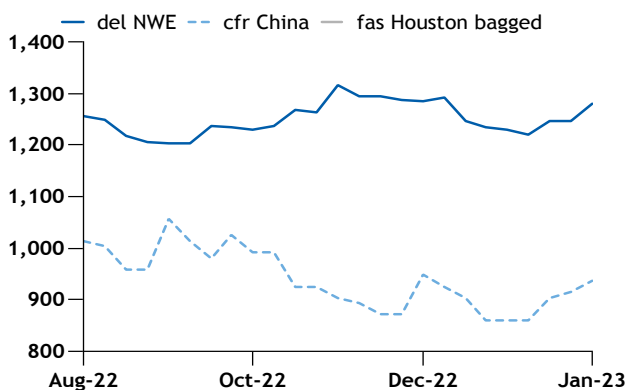
At an average of €1,156/t in January, the NWE spot price for virgin HDPE was less than half of the high end of the rHDPE BM range at the start of this year. With winter drawing to a close, a lower perceived threat of gas shortages and the resulting unmanageable electricity costs seemed to soften recyclers’ resistance to lowering prices at the top end of the market.

Prices for rPP black IM, and rHDPE black for pipe and thick-walled IM applications remained flat. Some recyclers reported a slight increase in volumes in February compared with January, but most are still looking to the second quarter – when demand is expected to increase seasonally – for a truer indication of whether the market is recovering from its slump in the second half of 2022.

Increases in the virgin HDPE and PP markets in February – in line with higher ethylene and propylene prices – will ease some of the pressure on recyclers selling to markets where prime, off-grade and recycled material compete.

HDPE spot

\$/t



Recycled polyolefins					
	Timing	Low	High	Midpoint	Δ
del NWE (€/t)					
High purity PCR HDPE bale, del NWE	17-Feb	250.00	350.00	300.00	nc
High purity PCR PP bale, del NWE	17-Feb	200.00	300.00	250.00	nc
Mixed polyolefin bale, PCR, del NWE	17-Feb	125.00	175.00	150.00	nc
98/2 flexible PE bale post-commercial del NWE	17-Feb	400.00	420.00	410.00	+20.00
80/20 flexible PE bale post-commercial del NWE	17-Feb	175.00	225.00	200.00	nc
Mixed colour flexible PE bale post-commercial del NWE	17-Feb	120.00	150.00	135.00	nc
del UK (£/t)					
HDPE natural PCR bale, del UK	17-Feb	1,050.00	1,200.00	1,125.00	nc
HDPE coloured PCR bale, del UK	17-Feb	550.00	650.00	600.00	nc
PP PCR bale, del UK	17-Feb	525.00	575.00	550.00	nc
Regranulate prices (€/t)					
rHDPE BM white, from PCR, deodorised, del NWE	17-Feb	1,800.00	2,300.00	2,050.00	nc
rHDPE IM black, del NWE	17-Feb	850.00	1,000.00	925.00	nc
rHDPE pipe dark/black, del NWE	17-Feb	900.00	1,060.00	980.00	nc
rPP grey, from PCR, deodorised, del NWE	17-Feb	1,400.00	1,700.00	1,550.00	nc
rPP IM black, del NWE	17-Feb	850.00	1,050.00	950.00	nc
rLDPE/LLDPE IM dark/black del NWE	17-Feb	600.00	650.00	625.00	nc
rLDPE/LLDPE standard film transparent del NWE	17-Feb	1,225.00	1,325.00	1,275.00	nc
rLDPE/LLDPE standard film dark/black del NWE	17-Feb	700.00	800.00	750.00	nc

Sustainability target tracker

Download our regularly-updated tracker of sustainability targets from global brand owners, which is available on Argus Direct at <https://direct.argusmedia.com/dataanddownloads>
 Search Data and Downloads from your dashboard to find out more.

MARKETS UPDATE – EUROPE

Prices for rigid polyolefin bales were also stable. Over-supply in the market is likely to take some time to dissipate when demand picks up. A requirement for German sorting firms to recycle material collected in 2022 by the end of February if it is to be included in their recycling quota for last year is an additional pressure in that market.

In the flexibles market, prices for honeycomb and amber rPE film pellets have come under particular pressure in recent weeks. These pellets are often used in cost-saving applications, so low virgin LDPE and LLDPE prices have had an impact. And they are seen as more “commoditised” grades, which can be manufactured from standard 98/2 bales by a simpler process than would be required for higher-transparency rLDPE/LLDPE pellets.

Prices for transparent and black pellets remained stable this week. But demand was largely subdued, outside certain sectors such as refuse bags and specialist high-quality recyclates for consumer-facing applications such as collation shrink packaging.

In the flexible PE bale market, robust demand for exports from Europe has lifted prices in February compared with January. The price of 98/2 bales rose above €400/t in the past two weeks. In particular, southeast Asian buyers have shown solid demand for European bales. One exporter attributed this to demand for recyclates from China after the lunar new year holiday period. With European recyclers struggling to pass on any increase in feedstock prices to their customers, this increase in bale prices will squeeze recycling margins.

PETROCHEMICAL MARKETS

Europe

European PP supply and demand fundamentals remain weak and sentiment is cautious.

Producers and converters are focused on inventory control and are operating only to serve immediate requirements. Low PP stocks and some production issues have kept supply and demand relatively balanced in February, giving producers some pricing power in what is a fundamentally weak market. Producers are targeting an €80/t increase to their freely negotiated contract prices – negotiations are still taking place and the outcome is likely to be a mixed picture depending on geography and grade.

PE European markets remain subdued – core demand is stable but overall sentiment is weak. Buyers are reluctant to commit too heavily to imports – given the upstream price volatility and the time that it takes for imports to arrive –

MARKETS UPDATE – US

Natural HDPE bale prices rise again

US prices for mixed-colour HDPE and PP bales have been stable so far in February, while strong demand for natural rHDPE resin has caused the price of natural HDPE bales to increase.

Sales volumes of natural rHDPE, which is versatile with a range of potential uses including consumer packaging, have been strong. Robust demand for the resin is cutting into the availability of natural HDPE bales, which are largely made up of recovered milk containers, pushing prices higher.

Prices for mixed-colour HDPE and PP bales have been unchanged since December. Weaker demand for general-purpose resins has started to impact some of the largest recyclers in the US. Advanced Drainage Systems announced that it will cut 15pc of its headcount and close three facilities owing to unfavourable market conditions, compounded by a housing market that is rapidly cutting construction projects.

Incrementally higher natural HDPE bale prices may have some upward impact on the mixed-colour HDPE bale market, as some buyers may have the flexibility to use mixed-colour bales with additional processing steps for certain applications, although this is likely to be fairly limited.

US rHDPE/PP price assessments coming soon

Argus plans to launch US market price assessments for HDPE and PP bales, and rHDPE and rPP pellets, on 3 March.

Olefin monthly contracts & Polymer spot			
	Timing	Midpoint	Δ
Ethylene contract			
del NWE €/t	Feb 23	1,260.00	+85.00
cfr Taiwan \$/t	Jan 23	915.00	15.00
Pipeline USGC €/lb	Jan 23	31.25	1.25
Polymer grade propylene (PGP) contract			
del Europe €/t	Feb 23	1,155.00	+80.00
del Taiwan \$/t	Jan 23	915.00	-5.00
fob US €/lb	Jan 23	43.00	-11.00
HDPE IM spot			
del NWE \$/t	17-Feb	1,333.00	-2.00
cfr China \$/t*	17-Feb	965.00	nc
fas Houston bagged \$/t	17-Feb	1,058.00	+22.00
Polypropylene spot			
homopolymer del NWE \$/t	17-Feb	1,346.0	-2.0
raffia cfr China \$/t	17-Feb	970.00	-5.00

*Main origin

but they are happy to use the prices available as a bargaining chip in negotiations with local suppliers. Producers are confident that buyers would prefer to buy local and that the supply chain issues, grade specificity and just-in-time nature of many converters are a barrier to utilising imports. But this is only true for the higher-value grades, and it does not take a high volume of imports to drag prices down. Many producers in Europe have some feedstock flexibility to help mitigate lower or negative PE margins.

Cheap Chinese PET imports that were fixed late last year are continuing to arrive this month, keeping pressure on European producers. But gains in the Chinese market since the start of this year, following the lifting of Covid-19 restrictions, and weakening gas and feedstock costs in Europe have allowed domestic producers to narrow the spread to imports.

Americas

US PP operations have improved in February compared with January, although a few maintenance issues are still keeping overall industry operating rates below 80pc of capacity.

Inventories built again in January, despite production shutdowns. January output rose from December, with plants operating at around 79pc of total capacity, according to the American Chemistry Council. Demand continues to show signs of increasing in February, as buyers are forced to restock after depleting inventories at the end of December.

US PE operations in February remain constrained, with force majeure at some plants continuing to tighten supply. Supply tightness has meant that little product is being

offered to the domestic spot market. Supply of high-density polyethylene (HDPE) grades was tightest as these were most impacted by the shutdowns. Demand in February continues to increase from weak January levels, but market participants said demand is still lower than expected. Demand remains weak across multiple sectors, including food packaging, which typically holds up better than other sectors.

Asia

China's domestic PP prices edged lower on muted demand, while import prices rose as the volume of offers fell.

PP futures extended price falls, subduing domestic trade with weaker sentiment. Downstream converters purchased only to meet immediate requirements. Operating rates in the plastic woven industry stabilised.

Prices in the Chinese PE market fell further this week owing to lower futures and weak demand. A lack of buying from downstream converters kept inventories high. Demand remains subdued as some downstream converters have yet to fully resume activity following the lunar new year holidays, but it will pick up more clearly after mid-February. Chinese domestic prices fell throughout the week.

Argus Chemicals coverage

Please see Argus' global olefins, polymers and aromatics reports for more prices, commentary, news and analysis from the petrochemicals markets. Visit www.argusmedia.com/chemicals to find out more

SUSTAINABLE FEEDSTOCKS

ARA bionaphtha premium at record low

The premium of fob ARA used cooking oil (UCO)-based bionaphtha to cif northwest Europe naphtha fell to its lowest on Argus record during the week, as selling interest emerged at much lower levels and buying interest remained thin, mainly in the petrochemicals market.

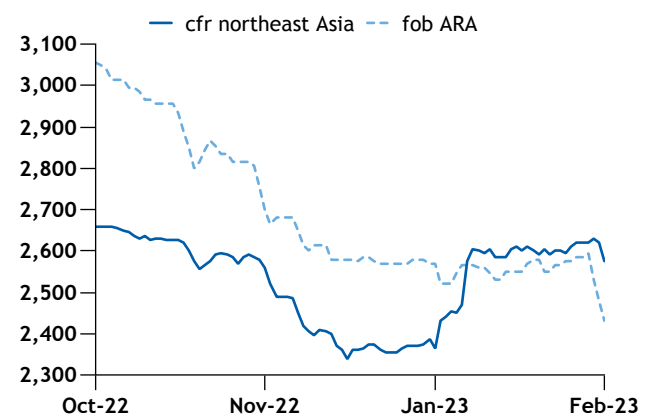
Biopolymers producers continued to struggle to pass on the cost to end users in Europe, although demand was heard to be picking up in the US. The cfr northeast Asia bionaphtha price also trended lower during the week, falling to its lowest since 13 January.

Argus Biofuels coverage

Please see Argus Biofuels for daily bionaphtha prices, and prices, commentary and analysis from the global biofuels market. See <https://www.argusmedia.com/en/bioenergy/argus-biofuels> to find out more.

Bionaphtha Snapshots				\$/t
	Timing	Low	High	Δ
Bionaphtha fob ARA	Jan	2,575.00	2,585.00	nc
Bionaphtha cfr Northeast Asia	Jan	2,590.00	2,610.00	+230.00

Bionaphtha \$/t



NEWS AND ANALYSIS

Argus spoke to recycling industry advocacy organisation Euric about how it is working to ensure that the recent avalanche of regulations around plastic packaging and waste work effectively to support the recycling sector

“When you recycle in the EU, you do so at the energy prices of the EU and the labour costs of EU workers, and you cannot compete with raw material that is produced straight from petrochemicals” - EuRIC’s Alejandro Navazas

Co-ordination is key in ‘legislative tsunami’: Euric

The recent “legislative tsunami” that has resulted from policy makers’ focus on plastic waste can be confusing for recyclers and industry associations, but they will be willing to participate if they are confident that new regulations are part of a coherent and co-ordinated plan to boost the recycling sector, advocacy body Euric told *Argus*.

In the space of just a few months, EU legislators have proposed a new Regulation on Packaging and Packaging Waste (PPWR) – which includes mandatory recycled content requirements across plastic packaging – and a revision to the Waste Shipment Regulation (WSR) that may end up completely phasing out exports of plastic waste from the EU within four years.

Euric is focusing on ensuring that these headline policies are coherent and are backed up by secondary legislation to enable them to succeed, project officer Maria Vera-Duran and scientific and policy adviser Alejandro Navazas told *Argus*.

The body strongly supports the extension of recycled content requirements beyond the rPET industry, after seeing their positive impact on rPET demand in recent years. But the regulations also give a good example of the need for co-ordination, Vera-Duran said.

In particular, she highlighted the need to align the deadlines for recycled content inclusion and at-scale collection and recycling to ensure that sufficient feedstock is available for recycling. The proposed recycled content targets begin from 2030, which is also the date at which the European Commission proposes to mandate that all packaging is “recyclable”, although the current proposal will not require all packaging to be recycled at scale until 2035. Euric would like this second date brought forward to 2030.

Overall, Vera-Duran and Navazas believe that the scale of the requirements is feasible by the deadline, provided that there is a co-ordinated approach (see table). Navazas also stressed the importance of legally binding targets for the development of the industry.

If the European recycling industry is to grow, policy makers need to provide an environment that encourages investment by removing the risk of buyers switching back to virgin materials when the prime market drops, Navazas said. Many buyers still mainly use recyclates to save money, and voluntary sustainability targets from customer-facing companies may not be seen as enough of a guarantee of demand to drive investment in the industry.

“When you recycle in the EU, you do so at the energy prices of the EU and the

EU proposed sustainability measures		
	2030	2040
Recycling content requirements		
Single-use plastic beverage bottles	30%	65%
PET contact-sensitive packaging	30%	50%
Non-PET contact-sensitive packaging	10%	50%
Other packaging	35%	65%
Reusable packaging requirement		
Takeaway beverages	20%	80%
Takeaway food	10%	40%
Non-alcoholic beverages	10%	25%

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labour costs of EU workers, and you cannot [consistently] compete with the raw material that is produced straight from petrochemicals,” Navazas said. “[Content requirements] give us certainty, that we haven’t had as recyclers up to now.”

WSR we there yet?

Navazas also highlighted the need for co-ordinated legislation to run alongside the proposed WSR amendment, to prevent a ban on plastic waste exports from having unintended consequences.

The EU exported almost 85,000 t/month of PE, PP and PET waste in 2022, most of which would be phased out under the proposed regulations, although exports to non-EU countries in the European Economic Area would not be affected. Euric is advocating for rule changes that would reduce restrictions and administrative checks on shipments between EU member states to equip the bloc to handle this waste within its own borders. And the organisation is keen to highlight the importance of boosting European recycle demand if waste exports are to be phased out.

The organisation is also pushing for changes to end-of-life rules around reprocessed plastic, to prevent recycled regrinds and pellets from being unwittingly caught up in the ban, Navazas said. End-of-waste regulations specify the point during reprocessing at which a recycled product ceases to be classified and treated as waste. Given that the process of consultation and adoption by the EU could take five years, there is some concern that the recent amendment to the WSR could have the unintended consequence of restricting European recyclers’ exports, and consequently demand for European-made recyclates.

Upcoming legislative developments to watch for include clarification over mass balance regulations and the potential extension of recycled content targets outside of the packaging industry, Vera-Duran and Navazas said.

An announcement on rules for the calculation and verification of recycled plastic content in single-use plastic beverage bottles, potentially including the use of mass balance accounting, is expected in the coming months, Vera-Duran said. This will be vital to tracking compliance with recycled content obligations, she said.

And the commission is currently analysing a study by the Joint Research Centre that found carmakers should be able to achieve 15pc recycled content in their plastic components by 2030, to determine whether a legally binding requirement for recycled content should be put in place for the automotive industry. A decision is likely by the end of this year, Navazas said.

Euric would support legislation that guarantees demand for recyclates, and Vera-Dunn said that this should ideally include a minimum quantity for vehicle-based recycled plastics so as to encourage design-for-recycling within the automotive industry.

Get the message

Clarification of the role that chemical recycling can play in the various recycling and recycled content targets is important, Vera-Duran and Navazas said, but so is clear messaging about when and where it should be used to avoid a negative impact upon design-for-recycling. “[We want to see] a list of the plastic waste that should be considered optimal for chemical recycling, which is substantially different from those which we can already do with mechanical recycling with a lower cost and lower energy,” Navazas said.

‘The lobbying in Brussels suggests that chemical recycling might be a way to bypass eco-design, which is what we don’t want’

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The concern, Navazas said, is that producers of plastic products will make less effort to design products that can be easily mechanically recycled if they feel that pyrolysis or depolymerisation can be considered as a “silver bullet” to deal with any waste.

Euric represents companies and organisations involved in mechanical and chemical recycling, Navazas said. But “for us the main problem with chemical recycling is that we know it does well at research level, but we have very few examples of industrial success”, he said.

“We have an issue with many wastes that we cannot mechanically recycle and I think that chemical recycling should focus in this direction,” he said. But Euric wants to avoid a situation where producers of plastic products are looking to design them to be recycled by “future upcoming technologies” rather than existing mechanical recycling, he said.

NEWS AND ANALYSIS

The FTC’s latest edition of the Green Guides could play a role in determining how different segments of polymers recyclers market their material for decades, writes Zach Kluger

Sustainability claims under scrutiny in US Green Guides

US rules around post-industrial recycled content and chemical recycling could be subject to revision as the Federal Trade Commission (FTC) seeks comments from the public for its 2023 update of the Green Guides, which could determine how recycled plastic products are marketed for the next decade in the US.

The *Guides for the Use of Environmental Marketing Claims* – the Green Guides – is a document maintained by the FTC that outlines general guidelines around environmental marketing. They are intended to help companies avoid creating and publishing green marketing that is deceptive or misleading.

“The FTC Green Guides are important and influential, which is why we must ensure this process is fair, credible and centered on data, not straw man arguments,” the Plastics Industry Association told *Argus*. “We look forward to an opportunity to submit as much substantive material as possible on behalf of our members and our industry.”

The FTC noted it was particularly interested in further clarifications on what can be labelled “recycled content” and “recyclable”. Lawsuits were filed last year targeting drinks manufacturers Keurig Dr Pepper and Niagara Bottling, arguing that their claims of recyclability were false or misleading. Retail company 7-Eleven is still embroiled in a recyclability lawsuit that was filed in 2021.

In addition to lawsuits, studies conducted last year by environmental groups Beyond Plastics and Greenpeace suggesting that the recycling rate for all plastics in the US is lower than expected – which drew significant industry backlash – seem to have drawn the FTC’s interest.

“Recent reports suggest that many plastics that consumers believe they’re recycling actually end up in landfills,” FTC chairman Lina Khan said following the announcement of the Green Guides update. “One question, then, is whether claims that a product is recyclable should reflect where a product ultimately ends up and not just whether it gets picked up from the curb.”

Being defined as “recyclable” should come down to a few factors, including the need for a market to exist for the post-consumer material and availability of collection of the material to at least 60pc of consumers, the Association of Plastics Recyclers (APR) president Steve Alexander said. APR said it has been working closely with the FTC since 2017 on improvements and clarifications to the Green Guides in preparation for the 2023 update. The public comment

‘One question is whether claims that a product is recyclable should reflect where it ultimately ends up and not just whether it gets picked up from the curb’ – FTC Chairman Lina Khan

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period for 2023's Green Guides is currently scheduled to end on 24 April.

The FTC's last update to the Green Guides was in 2012, when the commission clarified that marketers should qualify recyclability claims based on the availability of recycling to consumers, and that recycled content claims should only apply for post-industrial and post-consumer products and materials.

But the inclusion of post-industrial recycled material under the term "recycled content" is viewed as a hinderance by some industry participants. The majority of the plastic waste filling landfills is post-consumer, and the difficulties with recycling wide varieties of post-consumer plastics and materials tend to be much steeper than post-industrial.

"Post-industrial recycling does not help the issue of plastic waste that we are dealing with," Alexander said. "Ultimately, it's a distraction because post-industrial recycling is just a part of efficiency in the manufacturing process. When consumers hear the term 'recycled content', they think of the material they're putting in bins to be recycled."

'Ultimately, [post-industrial recycling] is a distraction... When consumers hear the term "recycled content", they think of the material they're putting in bins to be recycled' – APR president Steve Alexander

Critical of chemicals

Another category of recycled material that the Green Guides could impact is chemical recycling. While it has not been directly mentioned in the FTC's initial statements regarding the updates, chemical recyclers have drawn criticism from environmental groups for chemical recycling's larger carbon footprint and concerns over some of the chemicals released during the processes.

Chemical recycling is still in an embryonic stage, but it should only be labelled as recycled content up to a certain percentage because the processes blend the material with non-recycled feedstock, Alexander said.

Clarification of chemical recycling categories and standards such as mass balance accounting may be needed to avoid consumer confusion. Some guidance on how to treat plastic-to-fuel technologies such as pyrolysis with recycled content claims could also drastically impact how material produced using these processes is sold and marketed.

"Ultimately, the Green Guides are about ensuring consumers know what they're buying," Alexander said. "That's what's important."

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Capacities news

South Korea's SKGC confirms French site for rPET plant

South Korean petrochemical producer SK Geo Centric will begin construction of its recycled polyethylene terephthalate (rPET) plant at Saint-Avoid in northeastern France from 2025.

The plant, with a production capacity of 70,000 t/yr of rPET, is likely to finish construction by 2027.

The plant is a joint venture between SK Geo Centric, French environmental utility SUEZ and Canadian recycling technology firm Loop Industries, but it is unclear which firm holds the majority stake.

The three companies have together invested W620bn (\$480mn) to build the facility.

The plant uses SK Geo Centric's petrochemical know-how, SUEZ's experience with waste resource management and Loop Industries' depolymerisation technology in its operations.

The rPET produced from the facility will primarily be applied in the packaging sector. The EU is increasingly focusing on legislation surrounding plastic waste and the circularity of plastic products, leading to increased demand for recycled material.

By Akash Ravinran

Indonesia's BIPJ launches rPET pellet plant

Indonesia's BIPJ has launched its first recycled polyethylene terephthalate (rPET) factory at Jombang in east Java.

The plant will have a production capacity of 22,000 t/yr of rPET food-grade pellets and flakes for packaging in the food and beverage industry. It is expected to be fully operational in March.

The bulk of BIPJ's food-grade rPET pellets will be exported to capitalize on overseas demand for food-grade rPET pellets.

The BIPJ Jombang plant is a joint venture of Indonesian polymer producers Mayora Indah, Indus Business Ventures and Bumi Lancar Abadi.

By Akash Ravinran

Plastics recycler ADS to cut jobs in housing slump

Advanced Drainage Systems (ADS), one of the US' largest plastics recyclers, is cutting about 15pc of its workforce and closing three facilities because of a significant downturn in the housing market.

ADS did not announce which sites will close nor did it specify the number of job cuts, but it recently listed its global headcount at 3,700. The company will also eliminate temporary positions and overtime to further cut costs, and

is working towards reducing transportation costs and inefficiencies.

"The demand environment we are facing today is challenging," chief executive Scott Barbour said. "We're seeing domestic construction slow due to rising interest rates and inflation, which in turn is causing uncertainty in the market and slowing the release of projects for shipment and order rates."

While ADS' sales dropped by 8pc in the October-December quarter – ADS' fiscal third quarter – its profit rose by 12pc. Its revenue also increased by 17pc.

ADS used 1.3bn lbs of recycled material in 2022, or 45pc of the company's overall material usage. ADS uses recycled high-density polyethylene (rHDPE) and recycled polypropylene (rPP) for its piping.

While sales dropped by only 8pc in the quarter, there are worries from some market participants that the situation for recyclers involved in construction will worsen as housing starts drop.

Recyclers involved in housing and piping markets [have been hard-hit by a downturn](#) in housing starts and permits. One source involved in the markets described the situation as the "worst since the 2008 housing crash" for the industry.

By Zach Kluver

Legislation/associations

EU to launch ADD investigation against Chinese PET

The European Commission will launch an anti-dumping investigation into Chinese polyethylene terephthalate (PET) imports in the coming weeks after a complaint was formally filed by the European PET industry at the start of this week.

An initial complaint was made at the end of last year but received a "soft no" from the commission as the data supplied did not provide enough information to show actual injury rather than the threat of injury. The European industry then compiled further data, including for the fourth quarter of 2022, which tipped the commission into accepting the request.

Western Europe's net PET imports increased significantly last year to 968,000t from 450,000t a year earlier and 609,000t in 2020 according to Eurostat data. A large amount of the increase came from China, with imports more than doubling to 236,000t in 2022 from less than 100,000t a year earlier.

European PET producers had been [struggling with an influx of cheaper Chinese imports](#) throughout last year. Imports were arriving at wide triple digit euro discounts to domestically produced material, with higher feedstocks and operating costs leaving European producers uncompetitive and keeping operating rates severely reduced.

The spread between Chinese imports and domestic

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material has narrowed this year as gas and energy prices in Europe have retreated, while Asian feedstock costs have steadily risen following the lifting of Chinese Covid-19 restrictions. But continued oversupply in China, with more than 4mn t/yr of PET capacity expected to start up this year, has kept exports flowing into Europe and at discounts to European prices.

The threat of an investigation has been lingering for a while and some European importers were already looking to insert terms into contracts in the event any potential anti-dumping duties were to be implemented this year. The start of an anti-dumping investigation will probably add more caution to importers but it is not a guarantee that any duties will actually be implemented.

The commission has yet to confirm the start of an investigation or period it will look at. But under current processes it will submit a notice of initiation within 45 days of the submission of the formal complaint.

Once the notice has been published it typically has up to seven months to disclose its provisional findings and provisional measures, if any, with a further six months to implement potential definitive duties.

The EU previously placed anti-dumping duties on Chinese PET imports from 2004, but these were removed in 2017.
By Sam Carew

EPR helps recycling rates significantly: Study

A study conducted by the Recycling Partnership found that implementing extended producer responsibility (EPR) programs for packaging and printed paper could increase recycling rates significantly in the US.

EPR programs generally improve recycling access and participation rates by collecting a small fee from producers of consumer products, which then goes to fund waste collection, sorting and recycling. EPR in many cases allows consumers nearly universal access to recycling.

The report found that EPR could increase recycling rates in many US states to around 70pc, and that [Colorado's newly adopted EPR law](#), upon implementation, could improve the rate from its current 21pc to as much as 69pc.

Aside from greatly increasing recycling rates nationwide, the study also found that EPR programs could recover between \$13mn-\$91mn per state in material that would normally go to landfills, and reduce the carbon footprint from virgin plastic production significantly.

"We hope that the demonstrated impact of EPR for packaging and printed paper on recycling rates dedicated in this report will encourage stakeholders to continue supporting new EPR legislation," The Recycling Partnership said.

The demand for EPR programs has increased significantly as plastics recyclers struggle to obtain enough recyclable material to meet corporate goals for recycled content usage. In 2022, both Colorado and California passed EPR bills to

improve recycling rates and access to recycling.

The study also examined seven EPR programs globally and found major increases in recycling rates in almost every case. The most significant was Belgium, which had a recycling rate of only 10pc before its EPR program was passed, but recently reached a recycling rate of 89.8pc.

By Zach Kløver

Chemical recycling

PEX recycled chemically for first time

Finnish refiner Neste, Austrian petrochemical company Borealis, Finish firms Uponor and Wastewise said they have successfully recycled hard-to-recycled cross linked polyethylene (PEX) through pyrolysis.

The companies believe this is the first project to chemically recycle PEX. The collaboration have produced PEX pipes based on feedstock from chemically recycled PEX waste using an ISCC PLUS certified mass balance approach. ISCC PLUS is a sustainability certification program for bio-based and recycled raw materials.

PEX pipes are used in the construction sector for water supply systems plumbing, heating and cooling. The chemical structure of PEX makes it nearly impossible to recycled through mechanical recycling processes.

The partnership said that this project shows that chemical recycling can close the loop for hard-to-recycle waste plastic waste.

Plastic pipe company, Uponor now have a long-term goal to use 100pc of its PEX waste as raw material through closed loop recycling.

Moving forward, the partners said that will evaluate further opportunities for cooperation. Aside from broadening the waste material pool, this may also include higher recycled volumes.

Wastewise processed Uponor's industrial waste from PEX pipe production through pyrolysis. Neste then co-processed the liquid at its refinery in Porvoo, Finland and Borealis fed this material into its steam cracker and polymerised it. Uponor then used the polyethylene to create new PEX pipe systems.

By Chloe Kinner

LyondellBasell, KIRKBI invest in solvent-based recycler

Petrochemicals firm LyondellBasell and Danish toy manufacturer Lego Group's holding company KIRKBI have announced an investment in APK, a provider of solvent-based recycling technology for multi-layer flexible packaging.

LyondellBasell, KIRKBI and others will invest approximately €130mn (\$139mn) in APK, which currently operates a pilot plant in Merseburg, Germany. Both companies will

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become minority stakeholders in APK.

APK's Merseburg plant started up in 2018 and has an input capacity of 8,000 t/yr. It uses a solvent-based approach to separate the layers of multi-layer flexible packaging – which is very difficult to recycle by mechanical means – and produces recycled low-density polyethylene (LDPE) “with a high degree of purity suitable for new packaging materials”.

The company said it plans to build further plants using the technology – known as “Newcycling” – to increase its capacity.

“Advancing this technology... will enable more plastic packaging waste to be reintroduced back into the value chain and will address the demand from consumers and brand owners for more sustainable packaging,” said LyondellBasell's executive vice-president of circular and low-carbon solutions Yvonne van der Laan.

“We look forward to providing strategic, financial and commercial support while APK establishes technology that will complement mechanical and chemical recycling,” KIRKBI's head of circular plastics investment Damir Hamzic said.

LyondellBasell already has a number of recycling interests in Europe, including mechanical recycler Quality Circular Products (QCP) and an upcoming chemical recycling facility that will be based on proprietary pyrolysis technology.

By Will Collins

Freepoint Eco to build 192,000 t/yr recycle facility

Connecticut-based chemical recycler Freepoint Eco-Systems will build a recycling facility with a capacity of 192,000 tons/year.

The prospective recycling facility, with a capacity to consume 384mn lb/yr, would be one of the largest in the US, according to Ohio-based Alterra Energy, from whom Freepoint Eco is licensing the pyrolysis technology for the facility.

While the exact location and planned start date for the facility are still under wraps, the recycling plant will be built on the Gulf coast, Alterra said Wednesday.

Shell will be purchasing offtake from the facility. Last year, Shell [invested in building two chemical recycling plants in the Netherlands](#).

This marks Freepoint Eco-System's fifth advanced recycling project so far. Previously, the company announced it was [building an Ohio facility](#), and was partnering with TotalEnergies and Plastic Energy to build [plants in Texas and Spain](#). The facilities are not yet operational.

Freepoint and Alterra did not immediately respond to queries regarding any concerns about their ability to source enough plastic waste to use the full capacity.

By Zach Kluver

Chemical recycler Revalyu expanding to US

German-Indian chemical polyethylene terephthalate (PET) recycler Revalyu Resources will expand to the US with a 225,000 lb/d facility in Georgia.

Construction will begin in the first half of 2023 and production is expected to begin in 2024, Revalyu said. The facility will cover 43 acres in Statesboro, Georgia, and the company eventually plans to expand capacity to 450,000 lb/d.

Revalyu's current glycolysis recycling facility is in Nashik, India. It uses glycolysis to break down PET to base monomers, which can then be used to make new plastic.

Glycolysis is a different process from the more popular plastic-to-fuel process of pyrolysis, which is used by chemical recyclers such as Nexus Circular and ExxonMobil.

Revalyu did not immediately respond to a request for comment on their current recycling capacity. It has a corporate goal to recycle 2mn lb/d of plastic waste.

By Zach Kluver

Phillips 66 receives chemical recycling certification

Phillips 66's Sweeney refinery in Texas has received ISCC Plus certification, which certifies the ability to produce circular plastic feedstocks from pyrolysis oil.

The refinery won certification to produce ethane, propane and propylene and a few other feedstocks, Phillips 66 said.

While most large energy companies besides TotalEnergies have largely stayed away from investing in large-scale mechanical recycling, some – such as Exxon and Phillips 66 – have invested in chemical recycling, which produces virgin-quality material and can integrate into existing facilities.

In May 2022, a slim majority of Phillips 66 shareholders approved a resolution to investigate shifting from virgin to recycled polymers production.

Phillips 66 did not immediately respond to a request for comment on where it will get its pyrolysis oil.

By Zach Kluver

Chemical recycling project tracker

Keep a track of the global chemical recycling project pipeline, including a view on capacities and pyrolysis oil offtake agreements, with our chemical recycling project tracker, available on Argus Direct at <https://direct.argusmedia.com/dataanddownloads>.

Search Data and Downloads from your dashboard to find out more.

NEWS IN BRIEF

Japanese petrochemical producers **Sumitomo Chemical**, **Mitsui Chemicals** and **Maruzen Petrochemical** plan to study the feasibility of chemical recycling and using bio-feedstocks at the Keiyo industrial zone in Chiba.

The firms signed an initial agreement on 30 January to collaborate on the feasibility studies, according to Sumitomo Chemical, which will explore using biomass feedstocks such as bionaphtha and bioethanol, developing and implementing material and chemical recycling technologies, as well as how to source biomass and collect waste for recycling.

Norwegian firm **Quantafuel** has been granted planning permission for its planned waste processing facility in Sunderland, in the northeast UK.

The firm intends to build a 110,000 t/yr sorting plant for plastic waste, alongside a pyrolysis unit with an input capacity of 80,000 t/yr. It expects construction to begin later this year and for the plant to be operational by 2025. The facility is intended to process mixed plastic waste from “across the north of England” that would otherwise be directed to incineration or landfill.

Maire Tecnimont subsidiary **NextChem** has signed an agreement giving it access to depolymerisation technology for recycling polymethyl methacrylate (PMMA). The firm signed

a deal with Italian company **Biorenova** to acquire, scale up and industrialise its proprietary CatC technology, which can break down sorted plastic waste into monomers. Nextchem intends to scale up the use of CatC in the plexiglass industry – the largest PMMA market – as well as expand its usage into other polymers.

TotalEnergies has collaborated with US firm **Ecolab** to develop packaging with post-consumer recycle (PCR) content for the latter’s range of highly concentrated cleaning products. The new bottles will use a compound from TotalEnergies that combines PCR with a “high-performing booster resin”.

“This partnership... fully contributes to our ambition of producing 30pc circular polymers by 2030,” TotalEnergies’ vice president of polymers for Europe and Orient, Olivier Greiner, said.

US petrochemical firm **LyondellBasell** and chemical recycler **Nexus Circular** have signed a long-term supply agreement under which Nexus will supply LyondellBasell with approximately 24,000 t/yr of feedstock from pyrolysis of plastic waste for its steam cracker in Channelview, Texas.

LyondellBasell intends to produce plastics based upon the pyrolysis oil feedstock to produce new plastics, which it would market under its CirculenRevive brand.



Argus Recycled Polymers is published by Argus Media group

Registered office

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