Hype over chemical recycling can cost investors dearly, while true solutions are overlooked, finds a new report

- *High energy costs and high profile failures are a warning for investors to stay away from chemical recycling, suggests new report by the Changing Markets Foundation;*
- *True solutions to the plastic crisis lie in improved collection, reuse and increased mechanical recycling capacity;*
- *Increased regulation and societal pressure will create clear winners and losers over the next decade, while investment in new plastic production capacity will end up as stranded assets.*

LONDON, 13 September 2021. In a new report, *Hot tickets and hollow promises: solutions to the plastic crisis,* the Changing Markets Foundation found that hyped technologies, like chemical recycling, are not fit for purpose and calls for major investors to instead put their money in proven solutions, such as separate collection, mechanical recycling and reuse/refill technologies.

Concern over the plastic waste crisis and the scramble to respond has given rise to a proliferation of solutions and also resulted in adoption of significant legislation in the European Union (EU) and beyond. Not all solutions are created equal, however, and some are more financially and technologically viable than others. Success or failure of different technologies will depend on the legislative landscape, which the report analyses in depth. It concludes that a concerning level of attention is going to unproven solutions, such as chemical recycling technologies, while proven solutions, such as separate collection and mechanical recycling, are being overlooked. Indeed, recycling capacity in the EU alone would need to increase fourfold from 2015-2030 to meet recently adopted recycling targets.

The false promise of chemical recycling

Chemical recycling – a suite of technologies which aim to recycle plastic waste by breaking plastic down to its component parts to turn into fuel or to make new plastics – has received a great deal of attention from consumer brands and the petrochemical industry, as well as investor interest. However, high-profile failures (such as hyped PET depolymerization start-up Loop Industries), a poor environmental track-record, issues with yield and a large number of cancelled or delayed projects, show that chemical recycling cannot deliver on its promises.

George Harding-Rolls, Campaigns Adviser at the Changing Markets Foundation said: “In their quest for quick-fixes, the industry has a tendency to jump to voluntary false solutions which fit with the incumbent business model of take-make-dispose. Investors should be wary of the hollow promise of unproven chemical recycling technologies, which are currently presented as a silver-bullet solution to the plastic crisis. Instead, they should carefully analyze legislative and consumer trends and put their money into proven solutions, such as separate collection, sorting and reuse delivery systems."

Growing regulations

Over the past 20 years there has been a clear upward trend in both the number and comprehensiveness of regulatory policies on plastic, with 25% of policies from 2000-2005 being more comprehensive compared to 59% in 2018 alone. The report takes a particular focus on the development of deposit return systems and accompanying legislation, which is predicted to increase the number of people living in countries with such legislation from 300 million to 1 billion between 2017 and 2030. This clear regulatory trajectory will create a favourable environment for business solutions based on collection, mechanical recycling and reuse.

Businesses could face a US$100 billion annual financial risk if governments require them to cover waste management costs at expected volumes and recyclability.[i] For this reason, investors should be steering the companies they invest in towards proven solutions and away from environmentally unproven chemical recycling technologies. They should recognize that companies offering proven solutions to the plastic pollution crisis will reap benefits from the transition to circular economy and increasing action on climate. The report highlights case studies including TOMRA, the Norwegian company who has built a competitive position for their collection of post-consumer beverage containers, being one of the few players in the market with an international distribution and service infrastructure.

Bernard Merkx, Waste Management and Recycling Expert and Co-Founder of Waste Free Oceans said "We need considerable investments in high quality sorting and state of the art mechanical recycling facilities. Even to meet the recycling targets already on the books, we need to at least double the mechanical recycling capacity in Europe. Yet the return on investment is reasonable and timely. As growing numbers of brand owners and companies are now obliged to include minimum recycled content in their products, improved separate collection, i.e., through deposit return systems, is of paramount importance. High quality separate collection is the best way to get clean streams of material several of which can then be recycled back into food packaging and other food grade applications. The use of recycled plastics to replace virgin plastics not only saves valuable raw materials, it also saves considerable amounts of CO2 emissions (>30%)."

The risk of stranded assets from new plastic production capacity

Meanwhile, in spite of the current plastic crisis, production is set to triple by 2040. The report makes clear that fossil fuel giants expecting future revenue from expanding petrochemical production, from which plastics such as packaging and synthetic fibres are manufactured, are overlooking the increasingly high risk of stranded assets —assets that still need to be paid for, but will no longer be able to produce the required income to do so due to a more restrictive regulatory environment to address the issues of plastic pollution and climate change.

“The plastics sector is planning for business as usual with continued growth, but it will be disrupted by new solutions and regulatory change – like so many fossil fuel incumbents before it”, said Kingsmill Bond, Energy Strategist at Carbon Tracker. “This Changing Markets report sets out some of the main new ideas emerging in the space”

The report suggests that investors instead look to the development in the reuse and refill space. Several promising companies are highlighted, offering innovative solutions to the wasteful way we currently consume and dispose of goods, and regulation is already taking shape for new business opportunities to emerge.

The report makes the following recommendations to investors:

- Investors should avoid being drawn in by the hype surrounding **chemical recycling** and should steward those they invest in away from reliance on these technologies, which are highly risky and potentially unviable.
- Solutions related to **separate collection and sorting technologies** are a unique opportunity for investment in the short-to-medium term, because regulation indicates they will experience rapid growth.
- Solutions aimed at scaling **reuse and refill** represent a suite of answers to the plastics crisis. Regulations such as all-in deposit-return systems also favour refill enterprises and pave the way for new business opportunities.

The executive summary is available here. The full report ‘*Hot tickets and hollow promises: solutions to the plastic crisis’* can be found here.

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Notes for editors

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The Changing Markets Foundation was formed to accelerate and scale up solutions to sustainability challenges by leveraging the power of markets. Working in partnership with NGOs, other foundations and research organisations we are working on effective solutions to our ongoing environmental crisis.

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[i] https://www.pewtrusts.org/-/media/assets/2020/07/breakingtheplasticwave_summary.pdf