

EMABAREGOED until 10.00 AEDT 23 November 2021

## Amcor, Coles, iQ Renew, Licella, LyondellBasell and Nestlé findings support Australian-first advanced recycling plant

Licella, supported by Amcor, Coles, iQ Renew, LyondellBasell, and Nestlé, have released a report highlighting the potential for establishing a local circular economy for soft plastic, with a focus on difficult to mechanically recycle plastic such as food packaging.

Advanced recycling allows soft plastic waste, like confectionery wrappers and bread bags, to be turned back into oil, then made into new food-grade packaging in Australia. The study found that using the oil created from waste plastic, in the local plastic packaging supply chain, delivers a 64% CO<sub>2</sub> reduction compared to crude oil.<sup>1</sup>

The study identified Altona in Victoria as the location best placed for an advanced recycling facility, given the area's existing infrastructure and manufacturing capabilities. It is an opportunity to establish Victoria, and Australia, as a leader in this emerging new industry.

If the new facility was constructed, it would provide a boost to local industry, with the potential to create over 300 new jobs in Victoria over the next five years. The facility could also contribute over \$100 million a year to the Victorian economy.

The report comes as a result of a feasibility study that demonstrated a circular economy for plastic is not only possible, but is essential for Australia to meet its National Waste Policy commitments. With Australia's National Packaging Targets requiring industry to use an average of 50% recycled content in packaging by 2025, the demand for recycled content, especially food-grade plastic, is expected to grow significantly.<sup>2</sup>

The advanced recycling facility would be an Australian first if built and presents the opportunity to divert up to 120,000 tonnes, or 24%, of the waste plastics sent to landfill every year in Victoria alone.<sup>3</sup> With over 500,000 tonnes of plastic going to landfill in Victoria each year<sup>1</sup>, the proposed facility would be an essential step towards a more sustainable future for plastic in Australia.

The proposed advanced recycling facility would use innovative Australian technology called Cat-HTR™ (Catalytic Hydrothermal Reactor), a form of hydrothermal liquefaction technology developed by Licella.

If built, the proposed facility would initially process 20,000 tonnes per annum of plastic waste, producing 17,000 tonnes of oil a year, that could be used in the local plastic supply chain. The facility can be expanded to process 120,000 tonnes of plastic waste per annum, resulting in the production of nearly 100,000 tonnes of recycled food-grade plastics per year.

The system-wide transformation required for Australia to meet its plastic recycling targets needs local initiatives, such as those outlined in this report, to come to fruition. Collaboration across industry and government is essential to drive this change.

[Report available online here](#)

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<sup>1</sup> Based on Primary Research conducted by consultancy Lifecycles (2021)

<sup>2</sup> 2017-18 [Australian Plastics Recycling Survey - National Report](#)

<sup>3</sup> Based on the National Waste Report 2020 Data and Primary Research conducted by consultancy Envisage Works (2021)

## NOTES:

- **Flexible (soft) plastics** are those which can be scrunched into a ball, like such as flexible packaging used for bread bags, cereal liners and biscuit wrappers unlike 'rigid' plastics such as bottles and tubs which are moulded and hold their shape. While rigid plastics can be recycled back into food grade packaging, this capability has not been available for soft plastics.
- **The Cat-HTR™ process for plastic waste** delivers 3-4 times more value and 45% less CO<sub>2</sub> emissions than Waste to Energy. Cat-HTR™ yields around 85% oil, with the balance becoming gas that can power the reactor.
- Exports of mixed plastic waste have been banned from July 2022 under the Recycling and Waste Reduction Act, meaning that domestic solutions for plastic waste must be in place by this date.

## THE PARTNERS:

**Licella** has developed its patented Catalytic Hydrothermal Reactor (Cat-HTR™) platform - the World's most commercially advanced hydrothermal liquefaction (HTL) technology. HTL is the 'next-generation' of advanced recycling, chemically transforming low value feedstocks into oil, which can be refined to high value fuels and chemicals. With more than A\$100M invested over 13 years, the Cat-HTR™ technology is commercial ready and proven across a wide range of feedstocks, including mixed End-of-Life Plastic. For more information, please visit [www.licella.com](http://www.licella.com)

**Amcor** is a global leader in developing and producing responsible packaging for food, beverage, pharmaceutical, medical, home and personal-care, and other products. Amcor works with leading companies around the world to protect their products and the people who rely on them, differentiate brands, and improve supply chains through a range of flexible and rigid packaging, specialty cartons, closures, and services. The company is focused on making packaging that is increasingly light-weighted, recyclable and reusable, and made using an increasing amount of recycled content. Around 46,000 Amcor people generate \$13 billion in annual sales from operations that span about 225 locations in 40-plus countries.

**Coles** is a leading Australian retailer, with over 2,400 retail outlets nationally and processing more than 20 million customer transactions each week. As part of Coles' Sustainability Strategy, under the Together to Zero focus area, Coles has implemented innovative recycling practices as it works toward its ambition of zero waste. Coles has been working with REDcycle since 2011 and thanks to its customers across the country has collected more than 1.9 billion pieces of soft plastics that have been turned into furniture, playground equipment, roads and most recently used in some of our supermarket carparks. Coles is a signatory to the Australian Packaging Covenant and an active member of APCO, supporting the 2025 National Packaging Targets including working towards 100% reusable, recyclable or compostable packaging by 2025 for Coles Own Brand and Coles Own Liquor Brand products. Coles was also a founding member of the ANZPAC Plastics Pact.

**LyondellBasell** (NYSE: LYB) is one of the largest plastics, chemicals and refining companies in the world. Driven by its employees around the globe, LyondellBasell produces materials and products that are key to advancing solutions to modern challenges like enhancing food safety through lightweight and flexible packaging, protecting the purity of water supplies through stronger and more versatile pipes, improving the safety, comfort and fuel efficiency of many of the cars and trucks on the road, and ensuring the safe and effective functionality in electronics and appliances. LyondellBasell sells products into more than 100 countries and is the world's largest producer of polymer compounds and the largest licensor of polyolefin technologies. More information about LyondellBasell can be found at [www.LyondellBasell.com](http://www.LyondellBasell.com)

**iQ Renew** is an Australian recycler, processing kerbside recyclables and creating new links between Australian community and industry. As the early adopter of CurbCycle's [Curby Program](#), iQ Renew is rolling out the collection, processing and measurement of targeted recyclables for product stewards in a secure, fun and rewarding way. [www.iqrenew.com](http://www.iqrenew.com)

**Nestlé Australia** is part of the global Nestlé group. Our vision is that none of our packaging, including plastics, ends up in landfill, in oceans, lakes and rivers, backed by a commitment that 100% of our packaging will be recyclable or reusable by 2025. We're also eliminating non-recyclable plastics, supporting the development of a market for food grade recycled plastic packaging, and committed to reducing our use of virgin plastic by a third by 2025. [www.nestle.com](http://www.nestle.com)