

POLYESTER RENEWAL: A BIG STEP TOWARD A SMALLER FOOTPRINT

By recycling waste plastic, polyester renewal technology improves the carbon footprint of a key building block used in the production of much-needed materials—while reducing waste.

At Eastman, we're dedicated to creating a circular economy that creates value from material waste. To do this, we leverage two Advanced Circular Recycling technologies: carbon renewal and polyester renewal.

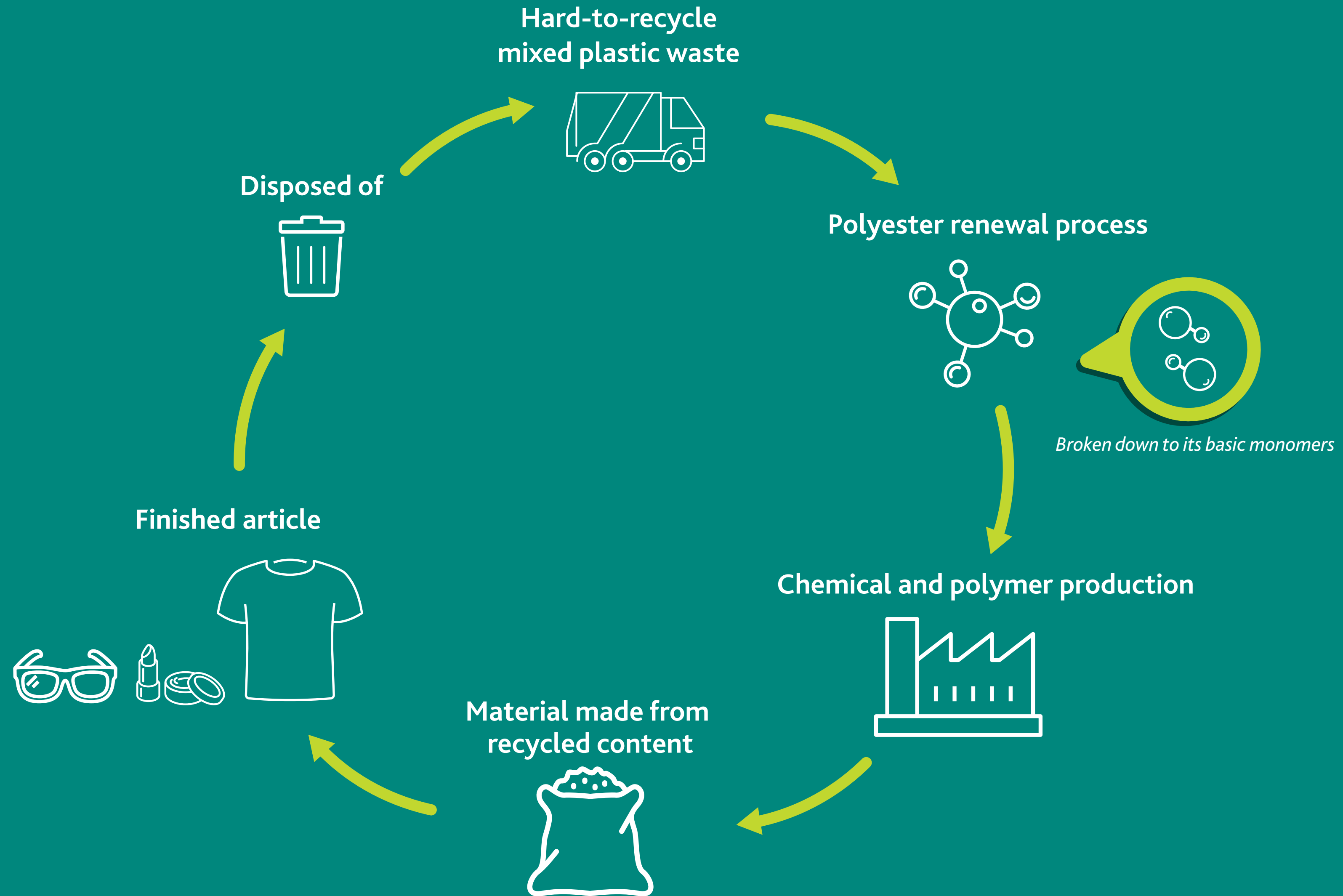
Polyester renewal technology (PRT), a type of molecular recycling, gives new life to waste polyester plastics, including sources that cannot be recycled with traditional mechanical recycling methods, such as post-consumer carpet, colored materials, textiles, and reclaimer rejects.

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POLYESTER RENEWAL TECHNOLOGY

The conversion of hard-to-recycle mixed plastic waste into its original basic monomers



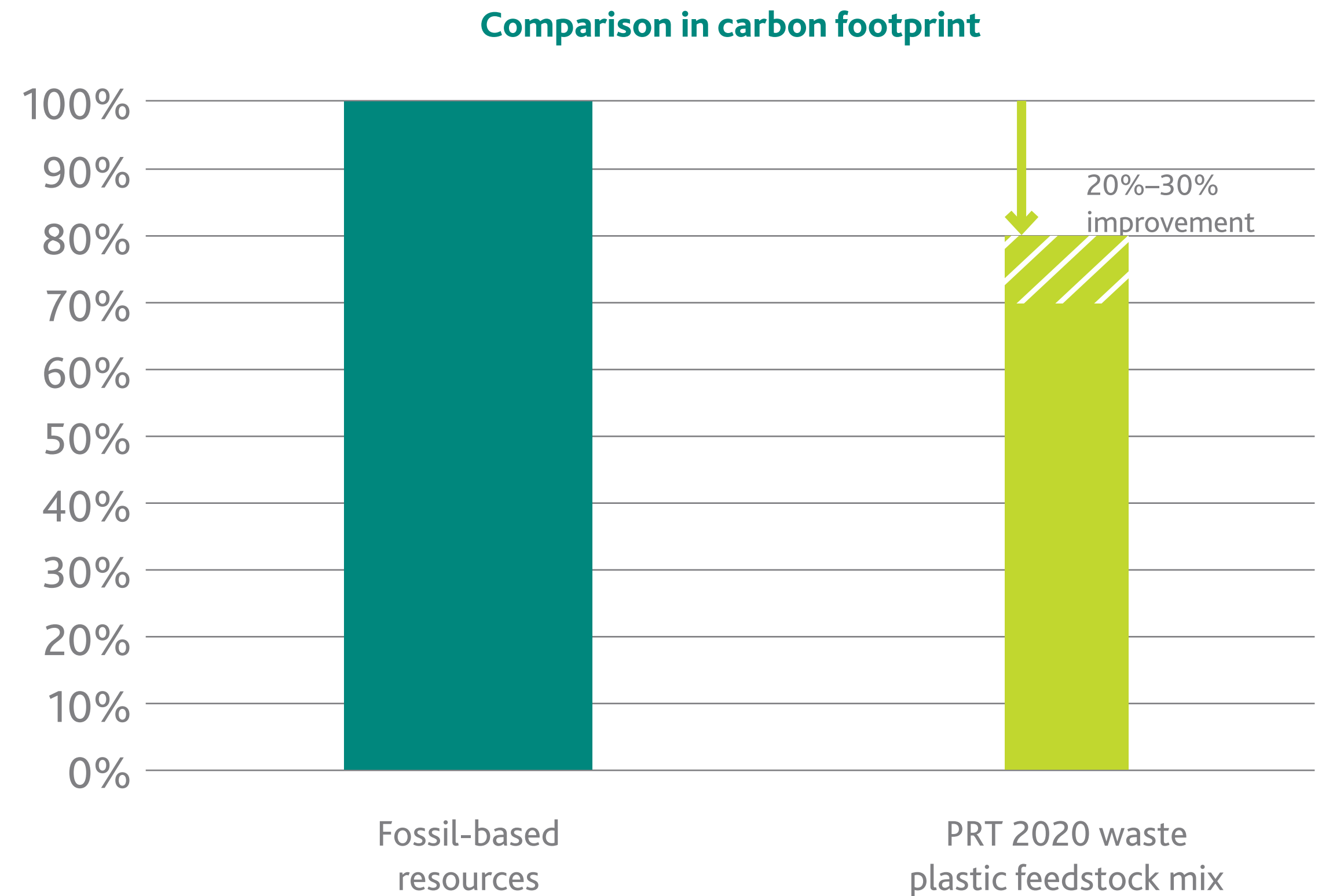
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REDUCING EMISSIONS

Not only does this technology help keep plastic waste out of landfills and incinerators, it also reduces greenhouse gas (GHG) emissions.

Eastman completed a life-cycle assessment (LCA) for PRT, which has been critically reviewed by CE Delft and verified to conform with the leading international LCA methodology standards (**ISO 14040 and 14044**). The LCA shows that by using waste plastic as a raw material to **replace conventional fossil-based feedstocks**, PRT can reduce the average GHG emissions to produce the intermediates DMT and EG by up to 30%. The range reflects variation in feedstock type, distance traveled, preprocessing requirements, and specific PRT technology.

Global warming potential kg CO₂/kg DMT/EG
(Amount of CO₂ equivalents emitted per kg of intermediates DMT and EG)

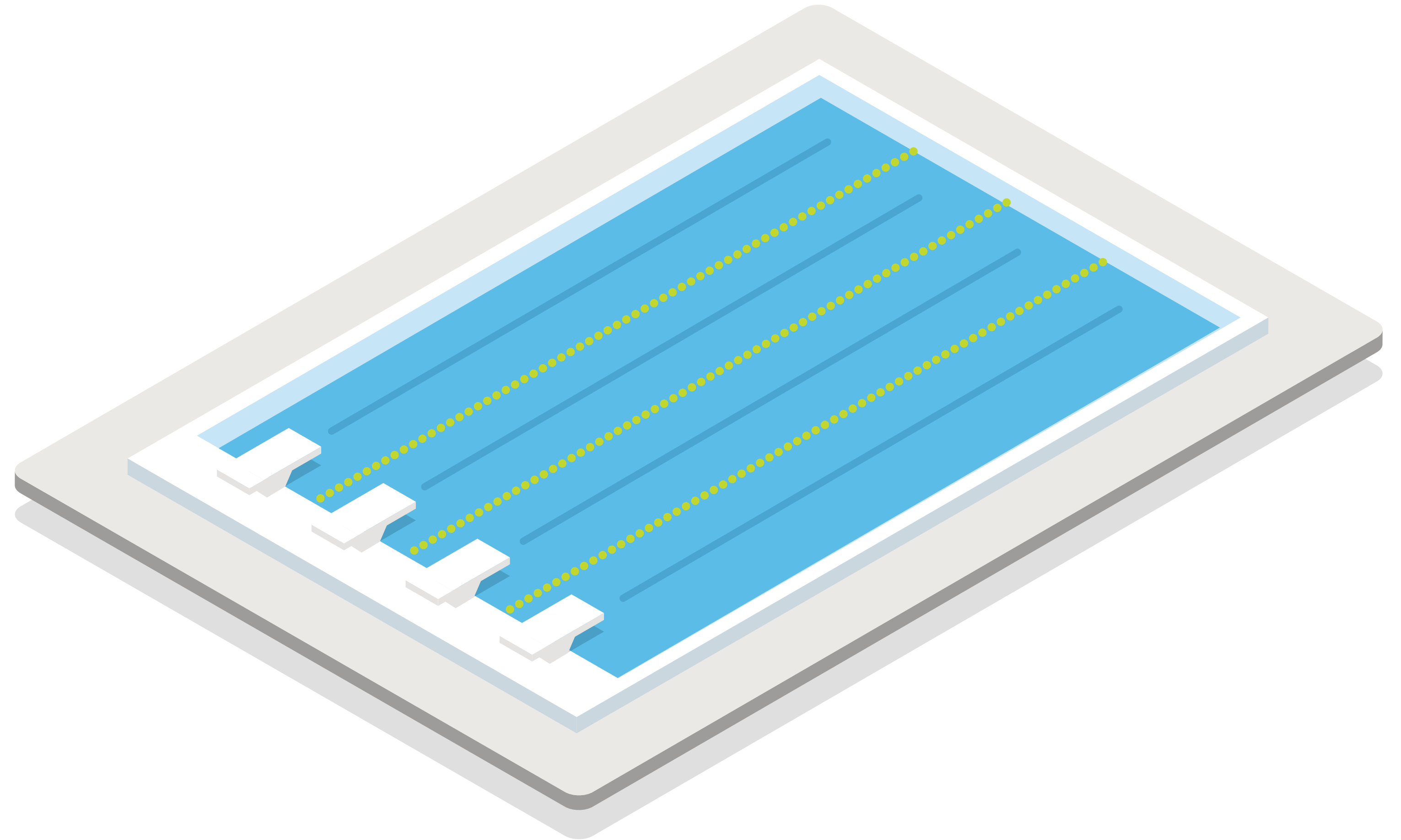


By using **waste plastic as a raw material** to replace conventional fossil-based feedstocks, PRT can reduce the GHG emissions for polyester intermediates production by production by **20%-30%**.

At Eastman, we've committed to using **250 million pounds (110 million kg)** of waste plastic as raw material in 2025.

That's the equivalent of filling:

2,400
OLYMPIC-SIZED SWIMMING
POOLS WITH PLASTIC WASTE



The world desperately needs a materials revolution that will help address the global waste crisis and climate change. Eastman's **Advanced Circular Recycling technologies** are a step in the right direction.

Explore more circular solutions at [eastman.com/LCA](https://www.eastman.com/LCA).

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