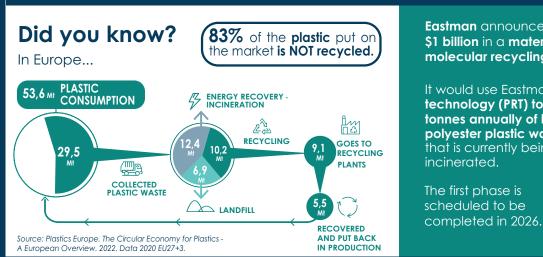
The path to zero waste -

the value of chemical recycling

Plastics are essential everyday materials in packaging, construction, medical, automotive, electronic industries...



Eastman announced its plan to invest \$1 billion in a material-to-material molecular recyclina facility in France.

It would use Eastman's polyester renewal technology (PRT) to recycle over 200,000 tonnes annually of hard-to-recycle polyester plastic waste that is currently being

incinerated. The first phase is

PRT does not turn plastic

Molecular - Advanced - Enhanced recycling: They are terms referring to chemical recycling technologies



waste into fuels. **PRT High quality** Waste final products feedstock ا ڈے DEPOLYMERIZATION MECHANICAL POLYMER PURIFICATION **PRODUCTION Durable food** Mix of PRT Monomers are used to manufacture new Feedstock hard-to-recycle (depolymerization) containers, small is cleaned via polyester plastic appliances, unzips waste plastics into their molecular plastics for any application, without sacrificing the quality. water bottles

building blocks ("monomers").

feedstock is 95% polyester rich

waste

PRT has among the highest % of material recovery rates amongst chemical recycling technologies.

of feedstock high-quality **plastic a**gai

PRT environmental **impact**

PRT allows more sustainable plastics processing than virgin feedstock:

>30% less greenhouse gas emissions.

Our plant in France will be able to potentially reduce them up to 80%.

Scan here Eastman's life cycle assessment (LCA)



Polyester Renewal Technology fully supports six key principles



process.

REDUCE, REUSE, RECYCLE

Reduces the need for virgin plastics and fossil feedstocks; recycles unrecyclable polyester waste infinitely without degradation.



2. MATERIAL CIRCULARITY

Enables plastic-to-plastic recovery at a very high yield. The recycled output is indistinguishable from material produced from virgin feedstocks.



3 ENVIRONMENTAL AND **SOCIAL IMPACT**

Emits less than fossil route; supports safe conditions for our employees and site communities.



4. COMPLEMENTARY TO MECHANICAL RECYCLING

Complements other recycling solutions in the recovery of hard-torecycle polyester plastic waste.



ECONOMIC VIABILITY

PRT is proven technology and can be economically viable at scale thus contributes to solving the EU's plastic waste crisis.



TRANSPARENCY

Eastman leverages multi-stakeholder certifications that are third-party audited; this is key to ensuring transparent and credible claims.



The path to zero waste the value of chemical recycling

PRT compared to other material-to-material recycling technologies TYPICAL FEEDSTOCK **Polyolefins** Polyester (PET Majority of Polystyrene **EXAMPLES** (flexible packaging) packaaina, textiles) (yoghurt pots) (bottles) EASTMAN ... RECYCLING EASTMAN GASIFICATION DEPOLYMERIZATION **PRT REUSE** LINEAR CHEMICAL PRODUCTION STEAM CRACKING PRODUCT OR **FOSSIL FUEL** MATERIAL INTERMEDIATES **EXTRACTION PRODUCT FORM** • O MOLECULES ^Q ¬ ¬ MONOMERS PLASTICS FROM TECHNOLOGY **Energy intensity**

Chemical recycling complements mechanical recycling to tackle hard-to-recycle waste

What's needed in Europe?



PRT and other innovative recycling technologies need to be supported by EU rules

because they are essential to achieve true circularity of materials, reduce EU's dependency on natural resources and move towards zero waste.



All plastic waste should be recycled, and not just post-consumer waste, to

ensure no valuable resource is lost, and should contribute towards recycled content targets.



Effective collection and sorting of plastics

waste, so waste is secured to a location where it can be treated in the most sustainable manner and where value can be extracted.



To ensure transparency and

WASTE INPUT = AVAILABLE RECYCLED FEEDSTOCK

Mass balance method is standardized, verified and regularly audited under established certification systems such as ISCC PLUS and others

The acceptance of mass balance to calculate and

trace recycled content through the value chain and for enabling recycling at scale.

Importance of mass balance for tracking recycled content in products

Mass balance chain of custody method HOW IT WORKS

It is a well known chain of custody method which allows continued use of the existing infrastructure to bring advanced recycling

to scale. Without mass balance, duplication of infrastructure is required (plants, storage, logistics, etc.), which dramatically increases environmental footprints, timelines, making it cost-prohibitive to get to a large scale.



MIX OF HARD-TO-RECYCLE POLYESTER RENEWAL CHEMICAL/POLYMER MANUFACTURING

how much recycled feedstock is used in plastics manufacture.

NO RECYCLED CONTENT

UP TO 100% RECYCLED CONTENT

MASS BALANCE ALLOCATION

Method used to record



Check out our position paper

For more information go to eastman.com/advocacy or contact: Fatma Sahin, director, government affairs, EMEA, at Fatma.sahin@eastman.com.

ABOUT EASTMAN

Founded in 1920, Eastman is a global specialty materials company that produces a broad range of products found in items people use every day. With the purpose of enhancing the quality of life in a material way, Eastman works with customers to deliver innovative products and solutions while maintaining a commitment to safety and sustainability. The company's innovation-driven growth model takes advantage of world-class technology platforms, deep customer engagement, and differentiated application development to grow its leading positions in attractive end markets such as transportation, building and construction, and consumables. As a globally inclusive and diverse company, Eastman employs approximately 14,000 people around the world and serves customers in more than 100 countries. The company had 2021 revenues of approximately \$10.5 billion and is headquartered in Kingsport, Tennessee, USA. In Europe, Middle East and Africa (EMEA), Eastman employs approximately 2100 and is present in 10 countries. EMEA accounted for 26 percent of total sales revenue in 2021.