



Recycling Plastics No One Else Can



A GROWING PROBLEM – A GROWING AWARENESS

The problem is not plastics themselves, but plastic waste....

20x

The use of plastics has increased twentyfold in the past half-century

1M+

Every day more than 1 million tonnes of plastics are produced worldwide

8M+

Every year more than 8 million tonnes of plastic waste leaks into the ocean

14%

Only around 14% of plastic packaging is recycled worldwide (14% incinerated, 40% landfilled)

GROWING MOMENTUM TO TACKLE PLASTIC WASTE :



Media campaign and societal awareness



Chinese import restrictions



Policies and voluntary commitments to increase recycling and improve waste management



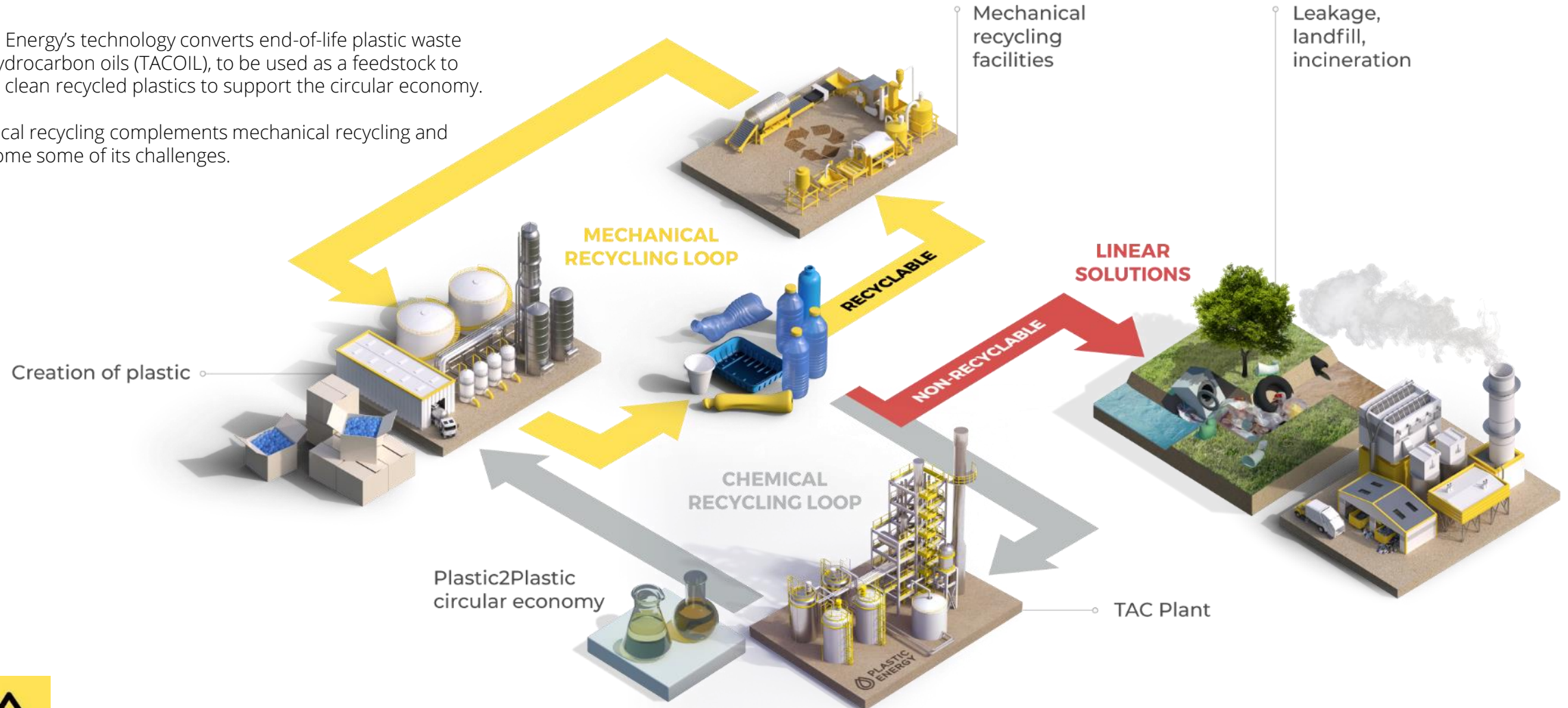
CIRCULAR ECONOMY PRESENTATION
FEB 2022

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CHEMICAL RECYCLING PROVIDES A SOLUTION

Plastic Energy's technology converts end-of-life plastic waste into hydrocarbon oils (TACOIL), to be used as a feedstock to create clean recycled plastics to support the circular economy.

Chemical recycling complements mechanical recycling and overcome some of its challenges.



WHY CHEMICAL RECYCLING?

INCREASE RECYCLABILITY

- ✓ Preventing pollution
- ✓ Recycling more
- ✓ Prioritising highest waste management option

INCREASE VIRGIN-QUALITY RECYCLED CONTENT

- ✓ Increasing recycled content in food-grade materials
- ✓ Developing and improving recycling infrastructure

SUPPORT SUSTAINABILITY TARGETS & COMMITMENTS

- ✓ Reducing dependence on fossil oils and resource depletion
- ✓ Helping brands achieve high percentages of recycled content in packaging



PLASTIC ENERGY – WHO WE ARE



INDUSTRY LEADER IN CHEMICAL RECYCLING

Convert end-of-life plastic waste into
hydrocarbon oils



PATENTED TECHNOLOGY

We have been developing our Thermal
Anaerobic Conversion process for 10 years



INDUSTRIAL PLANTS & OPERATIONAL EXPERIENCE

2 industrial and commercial plants
operating for the past 5 years



PLASTIC2PLASTIC PROCESS

Only company to have validated and
certified the Plastic2Plastic process for a
circular economy of plastics



PARTNERSHIPS

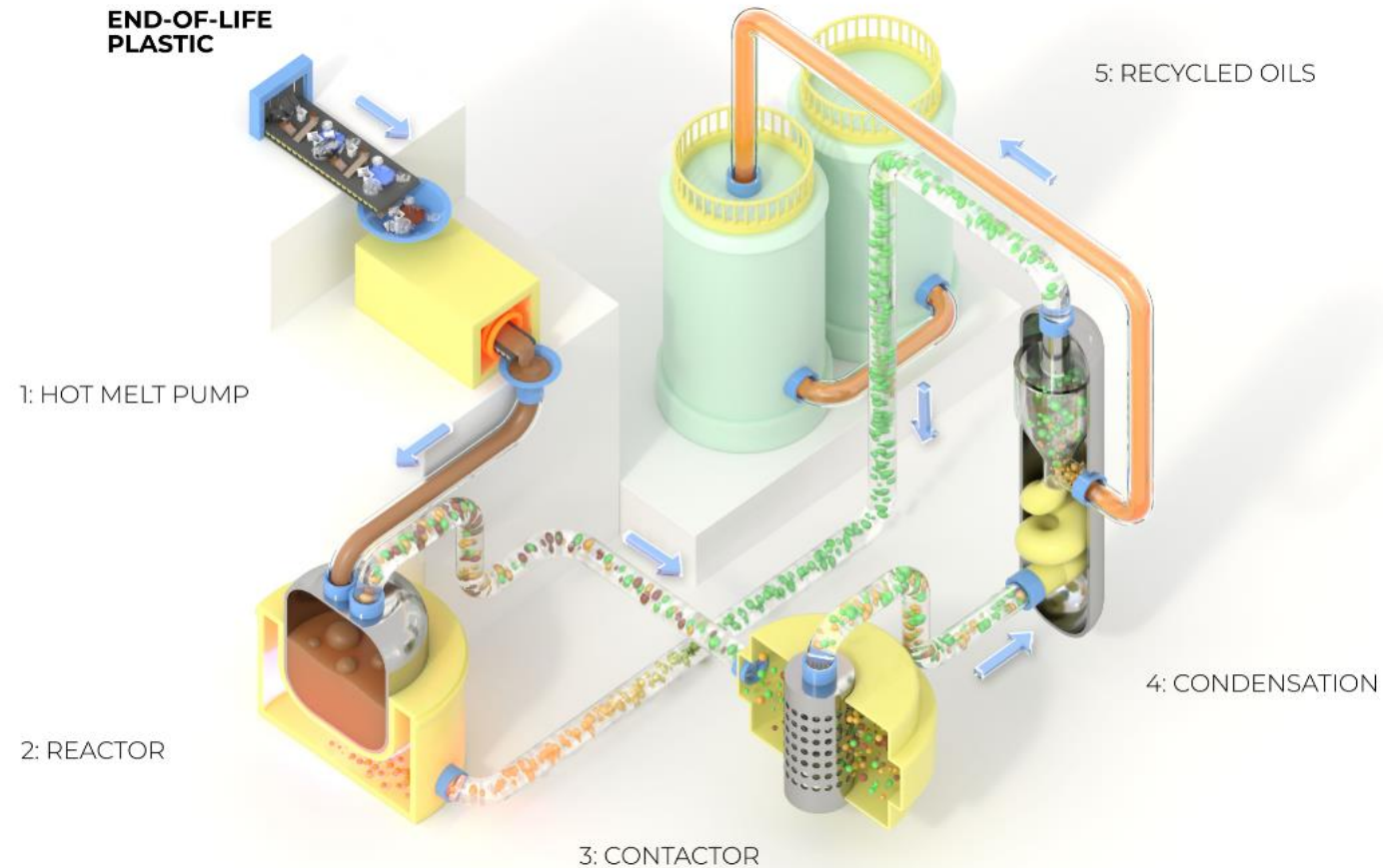
Long-term partnerships with
major industry players



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OUR TECHNOLOGY: THERMAL ANAEROBIC CONVERSION



PLASTIC ENERGY – WHO WE ARE

CERTIFICATIONS



Since 2019, our Almeria and Seville plants have been certified through ISCC PLUS following the mass-balance approach.



Our Seville plant qualified for the RSB standard in December 2020, and we are the first end-of-life plastics chemical recycler to achieve RSB certification.



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AWARDS



CEO Carlos Monreal was recognised as a Top 40 Power Player in the Chemical Industry (2020, 2021, 2022)



Recognised as a BloombergNEF Pioneer for our leadership in innovative transformative technologies



Won 3 IChemE Global Awards in Innovative Product, Sustainability and Best Overall



Click the play button above to
watch a short video



PLASTIC ENERGY – OUR MISSION



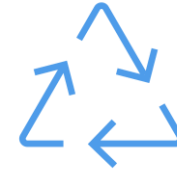
REDUCE POLLUTION

Improve waste management by diverting plastics away from landfills and incineration, and preventing leakage into our oceans



CIRCULAR ECONOMY

Contribute to closing the plastic loop



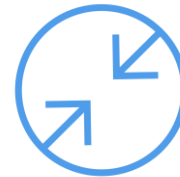
INCREASE RECYCLING

Support countries in reaching recycling targets by recycling previously non-recyclable plastics



HIGH-QUALITY RECYCLED CONTENT

Increase availability of virgin-quality recycled content suitable for food-grade products



REDUCE OIL DEPENDENCY

Reduce the dependency on fossil oils and the production of virgin plastics



ECONOMY

Boost local economies by building new plants and creating jobs



OUR FEEDSTOCK AND PRODUCT

FEEDSTOCK

- Mixed, multi-layered, contaminated plastic waste (within limits)
- No need to wash or separate by polymer-type



LDPE
HDPE
PP
PS



PET
PVC
EPS
Category 7



PRODUCT

- Each tonne of plastic waste chemically recycled will produce approx. 850 litres of TACOIL
- Output replaces fossil oil in the cracker



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PROVEN TRACK RECORD IN THE VALIDATION OF THE CIRCULAR ECONOMY – PLASTIC2PLASTIC

CERTIFIED CIRCULAR POLYMERS

We are the first company worldwide to have successfully validated the circular economy of end-of-life plastics

- Announced in Davos 2019 with Renewi, Plastic Energy, SABIC, Unilever / Vinventions / Walki Group / Tupperware
- Additional examples in 2020 include Berry / Mondelez
- Certified circularity and traceability by ISCC PLUS
- Recycled content following mass-balance approach

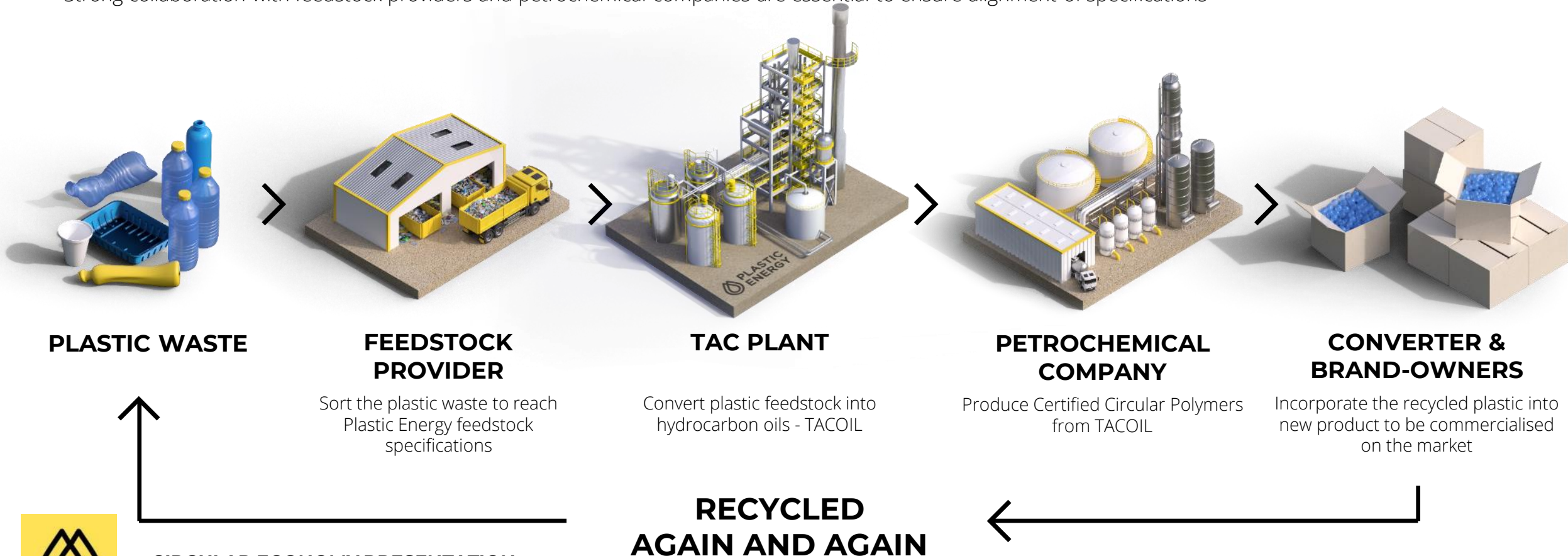
PROPERTIES:

- Alternative 'naphtha like' feedstock made from end-of-life plastic waste, replacing traditional fossil fuel in the manufacturing process
- Food-grade plastic packaging



VALUE-CHAIN COLLABORATION IS KEY TO THE SUCCESS OF CHEMICAL RECYCLING

- Chemical recycling has been the missing link until recently to ensure that plastics will be recycled
- Demand for high-quality recycled content from brand-owners are driving the development and demand for chemical recycling
- Strong collaboration with feedstock providers and petrochemical companies are essential to ensure alignment of specifications



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PROOF OF COMMERCIALISATION OF FOOD-GRADE PACKAGING WITH RECYCLED CONTENT FROM PLASTIC ENERGY'S TACOIL



i. Commercialisation of Magnum ice cream tubs and Knorr pots made with recycled content on the European market



ii. Philadelphia cream cheese packaging in Europe will be made with recycled materials starting in 2022



iii. In 2021 Vinventions launched its Blue Line of wine closures made from recycled plastic



iv. In 2020 REN Clean Skincare used recycled resins in its packaging for Evercalm Global Protection Day Cream



v. The Tupperware® Eco+ Straw Set was the brand's first product to use sustainably sourced food-safe material made out of recycled plastic



vi. Full closed loop example using post-consumer plastic from Tesco which was turned into cheese packaging



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OUR PROJECTS: UK AND EUROPE

UK



Recycling trial w/INEOS announced Q4 2021

NETHERLANDS



Geleen
Signed: Q4 2018; Operating: 2022

FRANCE



Signed: Q3 2020



Signed: Q1 2021

SPAIN



- Almeria
- Plant commissioned in 2015
 - First one in Europe with the REACH certificate



- Seville
- Plant operating since 2017
 - Additional plant in Seville announced in Q1 2022

TENERIFE



Sustainability project



OUR PROJECTS: ASIA

MALAYSIA ●



PETRONAS

Signed: Q2 2019; Operating 2023

INDONESIA ●

MoU signed in West Java for the construction of 5 plants



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OUR PROJECTS: USA

TEXAS ●

Signed: Q4 2021



...and many more in the pipeline



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