

GlyPET Project

PET Chemical Recycling

Develop and Pilot Circular Systems in Plastics, Textiles and Furniture Sectors CE-SC5-28-2020

Horizon 2020 - 23 September 2019



Axens Group Insights



Offices in
15 countries



Over
3,000
industrial units
under license



Over
500
modular units
references



Over
70,000
tons of catalysts
and adsorbents each year
coupled catalysts
conditioning &
regeneration services



Over
3,500
furnaces
(with more than
2,000 references)



OIL REFINING



PETROCHEMICALS



GASES



ALTERNATIVES
& RENEWABLES



WATER

Project Team – From R&D to Design, Business, Legal and Strategic Marketing



Frédéric Favre
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Process Design



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Stéphane Fedou
Development Director



David Gastou
Legal

Axens, a Leading Technology Provider

- Axens is a spin-off of IFPEN created in 2001
- Worldwide industrialisation: Axens has scaled-up more than 10 new technologies from lab scale to operating industrial units over the last decade
- Axens is currently a partner in 3D (DMX Demonstration in Dunkirk) project (H2020) together with IFPEN, ArcelorMittal, Total,... for CO₂ capture.

Current recycling



Clear bottles: wide production and high mechanical recyclability in closed loop



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GlyPET project target: Unlock PET recycling status

Price of PET scrap and flakes



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Hardly recyclable



Colored bottles: limited markets and reduced recyclability in open loop



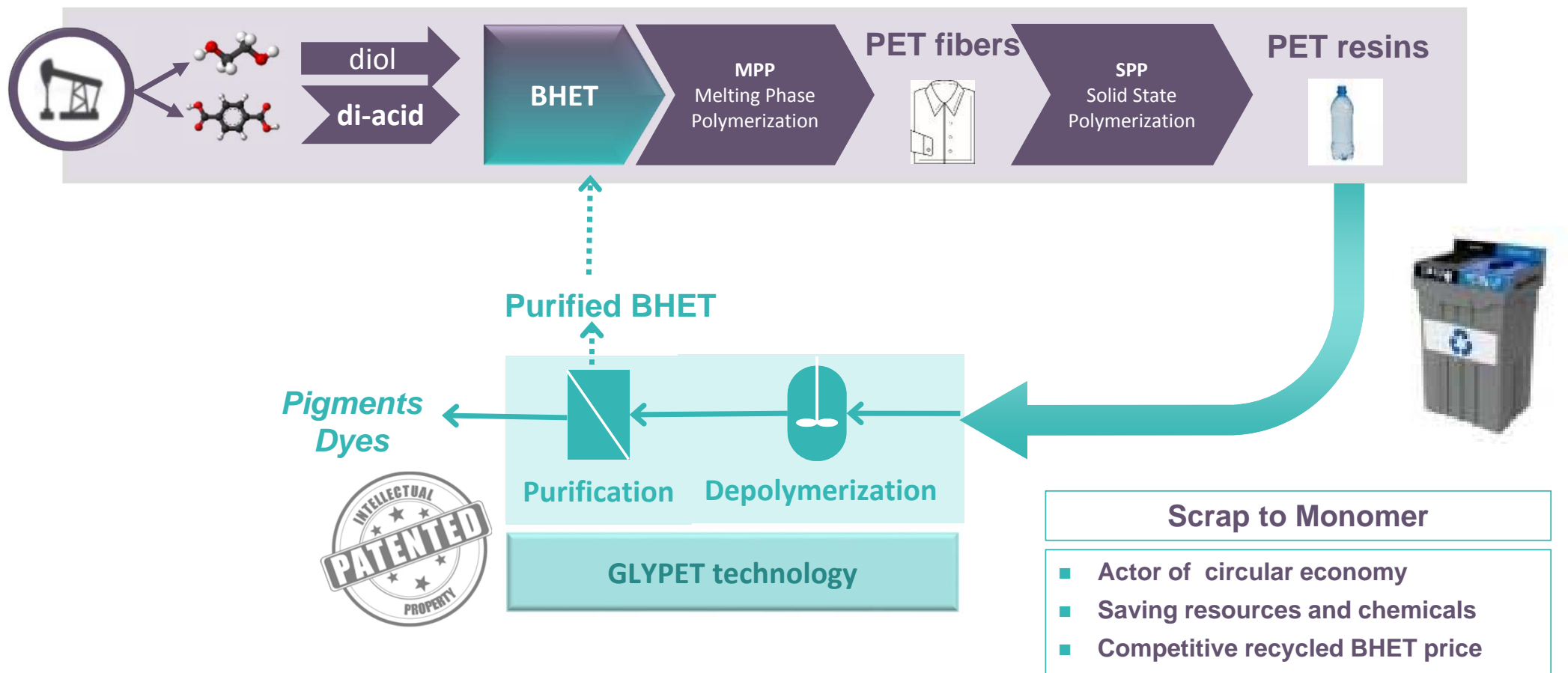
Opaque containers



Multi-layer thermoformed trays

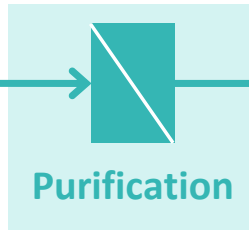
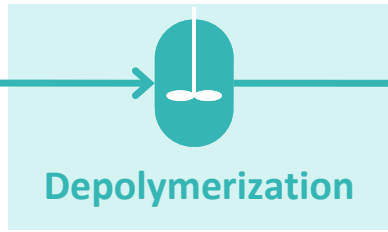
Recycling Technology

PET CONVENTIONAL PATHWAY: PETROLEUM-BASED PROCESSES





2015



Pure BHET Monomer

GLYPET concept



September 2019



Product quality & Economics Validation



5 patents (2 delivered)

Intermediary scale (more than 80 kilograms of PET depolymerized)

Partnership Strategy

Research & Innovation



Brand Owners

- Pulling the transition of the value chain toward recycled PET
- Over 10 potential partners already under discussion

Convertors

- Validation of final usage of recycled PET to packaging
- Looking for

Equipment Suppliers

- Partner of innovation and technology
- 2 EU potential partner already under discussion

PET Recyclers

- Supply of sorted scrap PET
- 3 potential partners already under discussion

Resin Producers

- Recycled BHET transformer to Recycled PET
- 5 potential partners already under discussion in EU

GlyPET Project

- Allow Recycling the non currently recycled Opaque, Colored and multi-layer PET (higher availability of resource and at lower price)
- In line with Horizon 2020 challenge 5 and in particular: Develop and pilot circular systems in plastics, textiles and furniture sectors CE-SC5-28-2020
- Horizon 2020 can participate to the financing of the Demonstration phase starting in 2020 (Engineering) and 2021 (Construction and Operation)

Thank you!

Axens
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