

# Roundtable: Progress on Plastics Recycling

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#### **Our approache to Circular Economy: Reduce – reuse – recycle**







## **Our approache to Circular Economy: Mechanical recycling**





#### **Our approache to Circular Economy: Monomerization**



#### **Polymer to monomer**



Intermediates

Input: Polymer with different chain lenght and additives



Diverse types of one specific polymer result in good monomer quality e.g. PA, PU



#### **Our approache to Circular Economy: Chemical recycling**



#### **Polymer mix to raw material**



Tolerant over a wide range of polymer blends Mixed plastic waste



#### **Our approache to Circular Economy: Chemical recycling**



#### BASF ChemCycling<sup>™</sup> Project

Partnership with Quantafuel for mixed plastic waste feedstock

Partnerships with Pyrum and New Energy for end-of-life tires feedstock

Ambition to process 250,000 metric tons of recycled feedstock annually from 2025 onwards.





#### Central vs de-central





Circularity vs CO<sub>2</sub> reduction





Regulatory support









#### **Central vs** de-central





#### **Purification plant**

~ 150-200 kt



- near or integrated into chemical complex
- **1 Purifier** can handle material from a multitude of Pyrolysis plants

BASE



8



#### CO<sub>2</sub> emissions [kg CO<sub>2</sub>e/t plastic]



\* pyrolysis used as chemical recycling technology

\*\* from primary fossil resources (naphtha)

Reference case: 1 ton low-density polyethylene (production of

ethylene in steam cracker and polymerization)





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# **We create chemistry**