Advanced recycling

What is advanced recycling?

Advanced recycling includes multiple technologies that use solvents, heat, enzymes, and other methods to purify or break down post-use plastics back into their molecular building blocks to create new plastics.

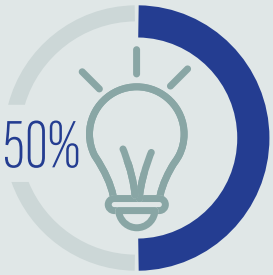
These technologies are emerging as a critical means to implement the transition to a circular plastics economy and are an alternative to plastics incineration or landfilling.

Why is advanced recycling so important?

Demand for plastics is expected to **triple by 2050** to meet our climate change and sustainability goals.

3x

- As much as **50 per cent** of plastics can be recycled using traditional mechanical recycling methods;
- The remaining **50 per cent** requires more **innovative** advanced recycling technologies to harness the inherent value of post-use plastics.



Environmental benefits

According to a 2019 study by Deloitte, a circular economy for plastics in Canada could result in an annual **GHG emissions savings of 1.8 MT of CO_2**, as well as deliver on a variety of other federal and provincial policy objectives:

- recycling targets
- zero plastic waste
- clean technology
- green economy
- low-carbon economy
- net-zero by 2050

Economic benefits

In a report prepared by the Closed Loop Partners, it was estimated that there is a **$120 billion economic opportunity** in Canada and the US directly connected to the commercialization of advanced recovery technologies.

Achieving a **90 per cent** diversion or reuse of post-consumer plastic waste by **2030**, would deliver significant benefits to Canada: **$500 million** of annual costs avoided; **42,000** direct and indirect jobs created.

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For more information, read our Advanced Recycling White Paper: Seizing the Circular Plastics Opportunity at CanadianChemistry.ca

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