

ISRI Position on Chemical Recycling¹

Overview

Innovation is a constant in the recycling industry. ISRI supports private and public efforts aimed at developing new recycling processes and technologies and encouraging manufacturers to adopt Design for Recycling® principles in their operations. Robotics, artificial intelligence, optical scanners, laser separation and other sophisticated technologies are now commonly found in recycling operations, allowing recycling to continue to be an essential part of the solution to creating a more resilient planet. As new recycling processes and technologies emerge to help address the increasing variety of plastics and plastics products in commerce, it is important to properly identify these processes and technologies and define them appropriately.

Significant investments are currently being made in researching non-mechanical processes (variously called “molecular”, “advanced”, or “chemical” processes) to convert end of life plastics back into recycled resin, resin precursors (i.e., monomers), and petrochemical intermediates and fuels. This position addresses when ISRI considers such non-mechanical processes to be recycling, and when they are not.

Position

Plastics recycling is a series of activities that processes end of life plastic materials into marketable commodities that are subsequently consumed in lieu of virgin materials as feedstock in the manufacture of material products *and not in the production of energy or fuels*.

- Non-mechanical processes that convert plastics at the end of life into recycled resins and monomers are recycling as they are producing materials to be “consumed in lieu of virgin materials as feedstock in the manufacture of material products *and not in the production of energy or fuels*”.
- Non-mechanical processes that convert plastics at the end of life into petrochemical products that are fuels or used to make fuels do not meet ISRI’s above definition of plastics recycling and thus cannot be properly considered recycling.²
- ISRI does not support the label of “advanced recycling” for non-mechanical recycling, as doing so creates a totally inappropriate and untruthful distinction between mechanical and non-mechanical recycling processes.
- ISRI fully supports recognition in policy of the distinction between recycling (inclusive of both mechanical and non-mechanical recycling) and solid waste management.
- ISRI does not support any policy in which non-mechanical recycling is considered manufacturing and mechanical recycling is not.

¹ As adopted by the ISRI Board of Directors on July 14, 2022.

² According to the Ocean Conservancy, processes converting plastics into fuel or energy sources “are not contributing to a circular system since materials are cascaded into fuel products instead of being sent back into plastics” (Ocean Conservancy Report on Recycled Content, p. 34).