



## Our Recycled Polyethylene (rPE) Business

Plastics are made to be remade. At NOVA Chemicals, our bold vision is to enable a circular economy that recaptures the value of materials at end of life to help create a world free of plastic pollution.

NOVA Chemicals has a three-pronged strategy to close the loop:

- 1. Sourcing Feedstock:** NOVA will collaborate across the value chain to bring new sources of feedstock to drive further circularity.
- 2. Recycling:** Forming business relationships with mechanical and advanced recycling entities.
- 3. Selling:** Focusing on high-quality rPE for premium applications such as food packaging and e-commerce that have a strong overlap with NOVA Chemicals' core business.



### NOVA's rPE Business

Today NOVA Chemicals sells 100% virgin and 100% rPE pellets.

We are in the rPE business.

- We offer a portfolio of post-consumer recycled linear low density PE (rLLDPE), post-consumer recycled low/linear low blend (rL/LLDPE), and post-consumer recycled high density polyethylene (rHDPE). We are selling rail quantities of rPE.
- We aim to be selling FDA-compliant rHDPE for food packaging applications in early 2023.
- We are now offering EX-PCR-NC4, a versatile mechanically recycled resin, sourced from distribution center flexible film: a mix of back of store stretch and front of store drop off. This resin contains 100% post-consumer recycled polyethylene and offers the greatest design flexibility to achieve meaningful recycled content incorporation targets.



## How Our Customers Use Our 100% Virgin and 100% rPE



Converters and brand owners use and/or blend according to the specific application and performance criteria.

- Converters and brand owners make decisions based on application but generally, we are seeing incorporation of rPE at 25-35 percent.
- Today, our customers are using rPE in a variety of applications. For example, flexible applications like retail bags and e-commerce (air pillows, mailers) and rigid applications like containers and closures.



## Mechanical vs. Advanced Recycling

- Mechanically recycled PE is a critical part of the solution for recycled content in packaging. It's here, it's now, it's a low carbon solution, and it's improving all the time.
- Advanced recycling is a game changer that can help enable a circular economy for plastics. We are investigating advanced recycling technologies including pyrolysis and gasification.
- NOVA Chemicals and Enerkem Inc. announced in April 2022 plans to move advanced recycling research to pilot stage in Edmonton, Alberta. [Press Release \(April 13, 2022\)](#).
- With funding from Alberta Innovates, the companies will expedite construction of a pilot-scale reactor system that converts syngas produced from used, non-recyclable and non-compostable plastics to feedstocks for virgin-grade plastics.
- We believe both mechanical and advanced recycling will continue to improve over the next 3-5 years, especially with catalytic investment in infrastructure such as the Closed Loop Partners [Circular Plastics Fund](#) and others.