



Plastic is good
We make it better

BioLogiQ



How

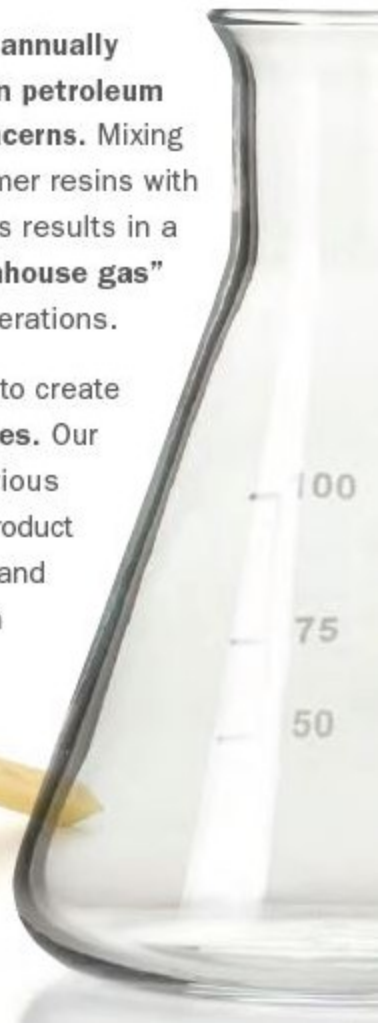
**do we make
plastics better?**

**We incorporate
renewable starch.**

BioLogiQ is creating a sustainable future for the plastics industry by revolutionizing the way plastic products are manufactured. The company makes bioplastic resins from all-natural, renewable resources. These resins allow plastics manufacturers to **greatly reduce fossil fuel-based plastic use and greenhouse gas emissions.**

BioLogiQ makes plastic from **annually renewable starch, rather than petroleum to address environmental concerns.** Mixing BioLogiQ's NuPlastiQ BioPolymer resins with petroleum-based plastic resins results in a **dramatic reduction of "greenhouse gas"** emissions, helping future generations.

The company formed in 2011 to create **a useful plastic from potatoes.** Our proprietary process uses various starches, including starch by-product from processing French fries and potato chips. There's a reason we're based in Idaho.



WITH A **100%** PLANT-BASED BIOPOLYMER CALLED NUPLASTIQ, BIOLOGIQ IS **THE WAY OF THE FUTURE**

NuPlastiQ® BioPolymer is a unique type of thermoplastic resin made with our proprietary process that converts highly crystalline starch powder into a low crystalline (mostly amorphous) plastic resin.

NuPlastiQ is supplied in pellet form. This thermoplastic material, when partnered with mainstream high performance polymers, has many properties which **are desirable for manufacturing a variety of products**, including films and bags, injection molded parts, blow molded bottles, and thermoformed parts.

NuPlastiQ's unique properties allow it to be easily blended with other plastic resins, including both fossil-fuel and bio-based materials. **It is drop-in-compatible with polyolefins (PE, PP, PS) and compostables (PLA, PBAT, PHA).**



Because of its strength, some bags made with 25% NuPlastiQ and 75% PE can be downgauged by 30%. The result is 50% less fossil-based plastics being used to make the bags.



BioBlend BC and MB

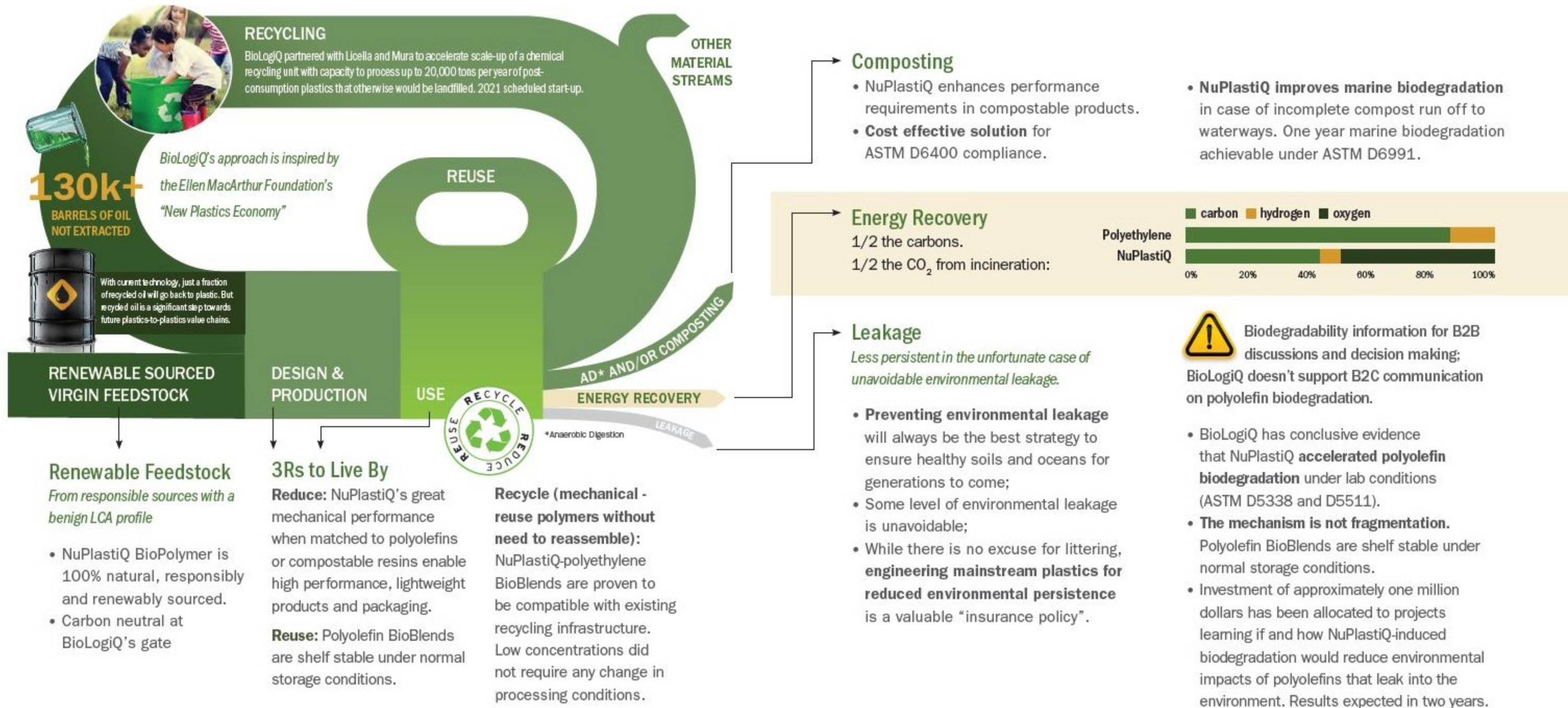
- Plastic to CO₂ and H₂O
Biodegradation without need for prior fragmentation.
- Cost effective solution for biodegradability (Industrially Compostable).

⚠ Not mechanically recyclable in most streams. Please check local requirements and label accordingly.

BioBlend XP and XD

- Reduced carbon footprint versus fossil-based.
 - Drop-in manufacturing.
 - Potential for light weighting extruded films and sheets.
 - Recyclable with special consideration.
 - 5 to 40% renewable content.
- (In many cases only practical route)





NuPlastiQ® XP High Performance BioPolymers for Packaging & Films

BioBlend 50% NuPlastiQ, 50% partner resin					
	Partner Resin	Typical Use	Density (g/cm³)		MFI (g/10min)
XP 22150	HDPE	Blown Film, Blow Molding, Extrusion	1.17	0.64	190°C @ 5.0 kg
XP 22250	HDPE	Blown Film	1.20	0.88	190°C @ 5.0 kg
XP 24150	LDPE	Blown Film	1.16	0.67	190°C @ 5.0 kg
XP 24250	mLLDPE	Blown Film	1.16	0.65	190°C @ 5.0 kg
XP 24550	LLDPE butene	Blown Film	1.16	0.30	190°C @ 5.0 kg
XP 24850	LLDPE octene	Blown Film	1.16	0.64	190°C @ 5.0 kg
XP 24875	HDPE/LLDPE	Blown Film	1.17	0.56	190°C @ 5.0 kg

NuPlastiQ® XD High Durability BioPolymers for Durable Goods

BioBlend 50% NuPlastiQ, 50% partner resin					
	Partner Resin	Typical Use	Density (g/cm³)		MFI (g/10min)
XD 25050	PP	Injection Molding	1.16	5.40	190°C @ 2.16 kg
XD 25150	PP	Injection Molding	1.16	3.5-4.4	190°C @ 2.16 kg
XD 25250	PP	Injection Molding, Extrusion	1.20	3.00	190°C @ 2.16 kg
XD 22620	HDPE	Blow Molding	1.04	1.08	190°C @ 5.0 kg
XD 26150	PS	Injection Molding	1.23	1.90	190°C @ 5.0 kg

NuPlastiQ® BC Biodegradable/Compostable BioPolymers for Packaging & Films

BioBlend Fully formulated					
	Partner Resin	Typical Use	Density (g/cm³)		MFI (g/10min)
BC 27130	PBAT	Mulch Film	1.30	2.75-4.25	190°C @ 2.16 kg
BC 27240	PBAT/PLA	Blown film, bags	1.30	3.70	190°C @ 2.16 kg



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