Accelerating Flexible Packaging Circularity through Design for Recyclability

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Our strategic priorities

Our targets: accelerating carbon neutrality and plastics circularity

Protect the climate

By 2030, Dow will reduce its net annual carbon emissions by 5 million metric tons. This represents a 15% reduction from Dow's 2020 baseline, and a 30% reduction from the 2005 baseline.
By **2050**, Dow intends to be carbon neutral (Scopes 1+2+3 plus product benefits).

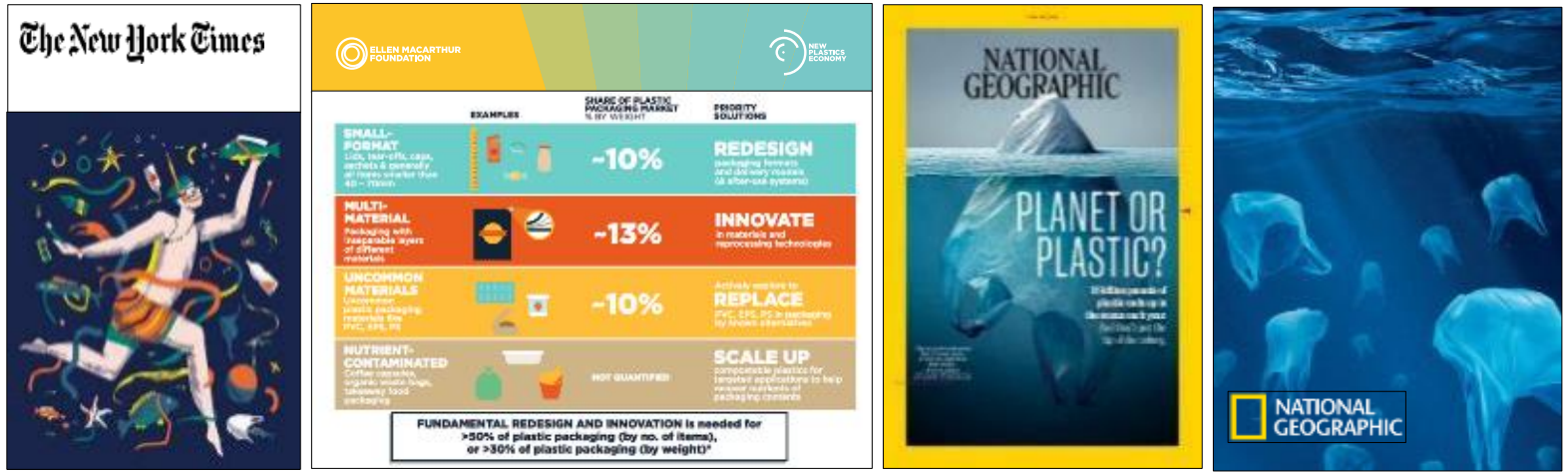
Stop the waste

By **2030**, Dow will enable 1 million metric tons of plastic to be collected, reused or recycled through its direct actions and partnerships.

Close the loop

By **2035**, Dow will enable 100% of Dow products sold into packaging applications to be reusable or recyclable.

Perception of Plastics
→ Need for Collection and Recyclability



Trend to
alternative materials

Recycling
and **Re-use**

Commitments:

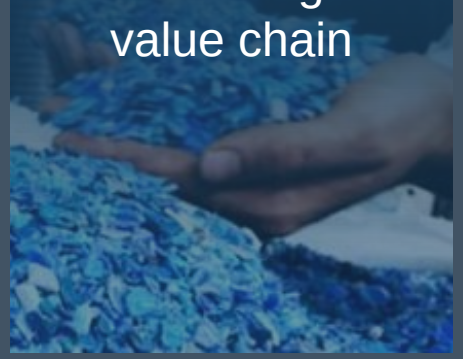
By 2035, Dow will help "close the loop" by enabling 100% of Dow products sold into packaging applications to be reusable or recyclable.

Strategy

Plastics Sustainability

Design for Recyclability
commercial reality

Mechanical recycling
transforming the value chain



Advanced recycling
picking up the pace

Bio-based
diversifying and expanding

Carbon
the truly global driver

Extensive Innovation Portfolio

Driving circularity with a lower CO2 footprint in EMEA

Benefits & Challenges of Flexible Packaging

Profits
- Efficiency
- USD / €
- CO_2

Promotion
- Brand positioning
- Customer loyalty

Protection
- Food Safety
- Product integrity

Processability
- Operational efficiency

What can we do to integrate recyclability?

MDO* Orientation Technology

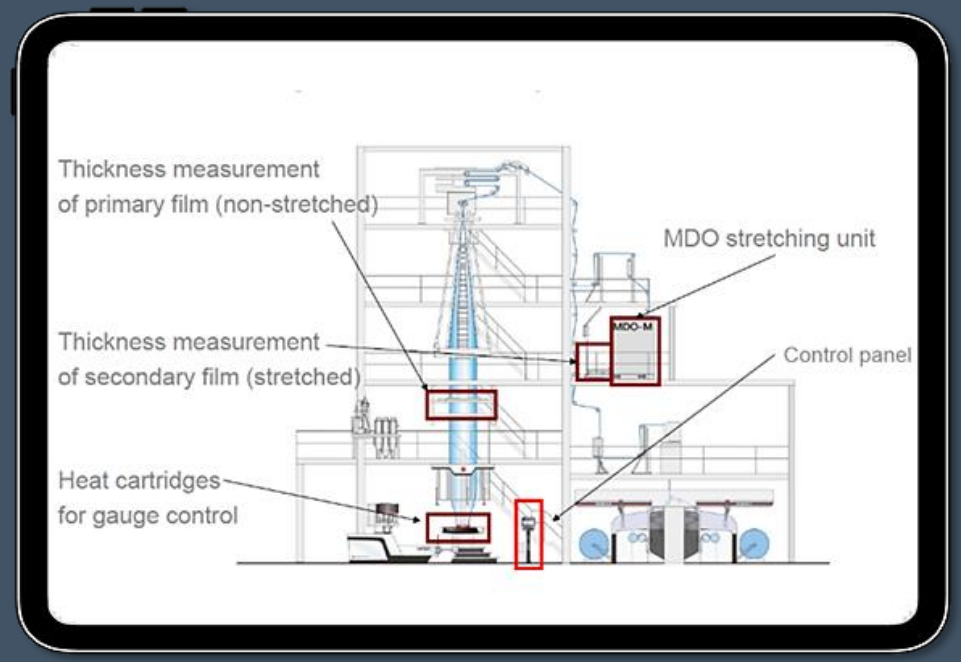
OPP/OPET/OPA

PE Film

Structure Redesign

MDO PE

PE Film



20+ MDO lines across EMEA

- **Fabrication:** Extrusion Efficiency, Orientation Window
- **Conversion:** Stiffness, Thermal Resistance
- **Pack Performance:** Optics, Dimensional Integrity, Toughness

*MDO: Machine Direction Orientation

It is all about collaboration

New solutions | **Collaboration** | **Sustainability**

Affinity™ polyolefin plastomers
Elite™ enhanced polyethylene resins
Innate™ precision packaging resins

Partnership with BOBST | HOSOKAWA MICRON | HOSOKAWA ALPINE | ELBA POUCH MAKING MACHINES

Metallized OPET

PE Film

Structure Redesign

Metallized Oriented PE

PE Film

Barrier Mono PE Pouch

Dow products bring several benefits in the **MDO Print web:**

- Remarkable stiffness
- Thermal resistance
- Broad stretching window
- Excellent optics

in the **Sealant web:**

- Stiffness/toughness balance
- Dimensional stability / Formability
- Low seal initiation temperature
- Good operating window on the packaging line

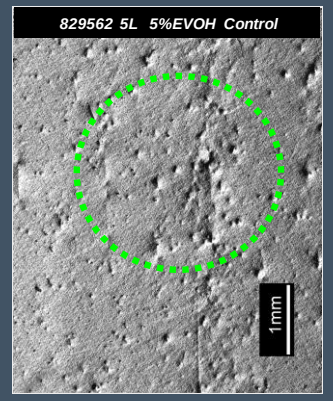
RECYCLEREADY TECHNOLOGY
for store drop-off recycling

Barrier polymers compatibilization

Traditional barrier film structure

PE
Tie
EVOH
Tie
PE

PE + RETAIN™
Tie
EVOH
Tie
PE + RETAIN™



Innate precision packaging resins

Bynel functionalized polyolefins

PIR Incorporation Design For Recyclability

Berry

Kellogg's

RECYCLEREADY TECHNOLOGY
for store drop-off recycling

Recycle If Clean & Dry
Store Drop-off
PLASTIC POUCH
how2recycle.info

What does this mean for you?

Recycling is no longer a nice-to-have.

It‘s a mandate, and the clock is ticking.

CO2 is a growing concern.

Flexible packaging is the best option and now can be circular.

Solutions are ready.

Let‘s work together to achieve your sustainabilty goals!

Seek

Together™