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# WHY IS IT A POTENTIAL RISK FOR THE US LLDPE MARKET TO BE RISING?



By John Richardson

# US LLDPE

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BY JOHN RICHARDSON NOVEMBER 2019

IT SEEMED like a good idea at the time. When the US petrochemicals industry sanctioned major investments in new polyethylene (PE) capacity 5-6 years ago, most of which was in linear-low density (LLDPE), there was little pressure from the public and legislators over pollution from discarded single-use plastics.

Not today, of course, as a result of a huge build-up in public pressure over the scale of pollution from single-use plastics, especially in the world's oceans. This has led to a wave of global legislation designed to restrict the use of plastics used in instantly disposable packaging materials. Some 55% of LLDPE ends up in these types of applications.

A great deal of LLDPE goes into films that contain layer upon layer of different grades of polymers – usually LLDPE and polyethylene terephthalate (PET) – along with aluminium.

The same challenges also apply to low-density PE (LDPE) which goes into many of the same applications as LLDPE. But US capacity additions in LDPE are far smaller in scale than those in LLDPE.

Because of these multiple layers, recycling of plastic films is often impossible. The same goes for flexible pouches which are again made from LLDPE, other polymers, aluminium and sometimes also cardboard.

It might be possible to redesign films and flexible pouches so that they are all produced from only one type of polymer with no use of aluminium and cardboard. But the technical challenges are huge and probably insurmountable in some end-use applications.

The redesign work will also come at a cost for which the brand owners may not be willing to pay. But polymer producers have no choice but to bear these costs because they are at risk of losing their licenses to produce.

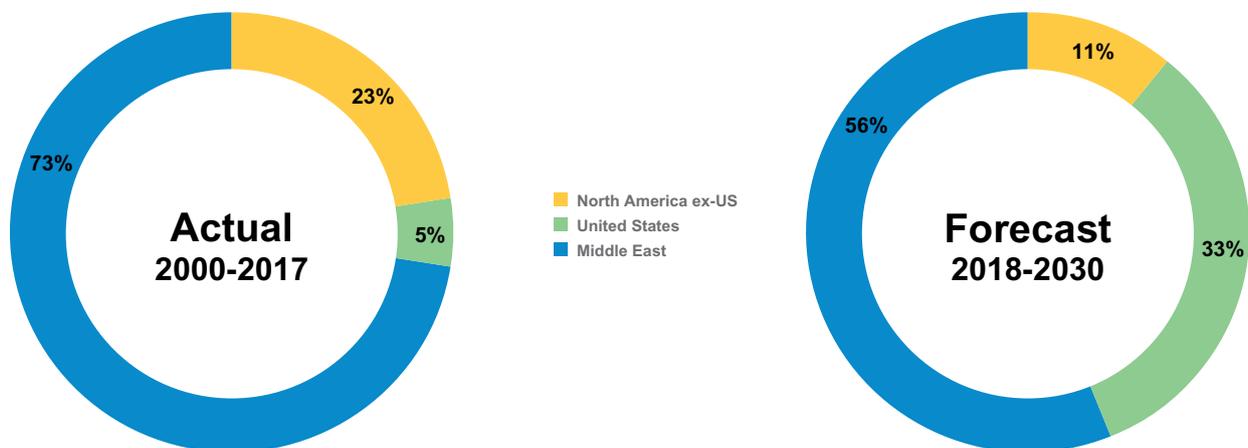
For every tonne of plastic rubbish removed, how many more will be added?

There will be some successes in redesigning films and flexible pouches. But in some applications, redesign to make use of only a single polymer will be impossible. These applications will as a result be more exposed to being banned by legislators.

Another problem is that even where redesign to a single polymer is achieved, this will still not protect some end-use applications from being banned, especially in the developing world.

Think of the single-serve pouch which was hailed as the great economic liberator in very poor countries where many people are too poor to afford a whole bottle of shampoo. The insurmountable logistical challenges of

### NET EXPORT COUNTRIES AND REGIONS – PERCENTAGE SHARES OF TOTAL NET EXPORTS



Note: Net exports are where exports exceed imports Source: ICIS Supply & Demand database

collecting single-serve pouches for recycling, even if they have been redesigned, might still lead to bans being introduced.

There is a trust amongst some polymer producers that logistical challenges will be fixed. I have heard it said that incentive systems will become so strong that developing countries will be able to tackle their plastic rubbish crises.

But Indonesia has 17,508 islands and 54.7m kilometres of coastline. Some 2 billion people, most of whom lived in the developing world, have no access to any rubbish collection and processing systems.

They have no choice other than to dump their plastic rubbish directly into the rivers and oceans. This makes the cost and complexity of setting up rubbish collection systems, landfill sites and recycling systems etc. simply enormous.

All the major polymer companies seem to be taking the recycling challenge seriously.

But those with new capacities face the problem that while they are spending money in the recycling sector, they are also spending money on operating, marketing and selling their new capacities in order to fulfil commitments to investors.

How does the US, given the scale of its capacity additions, balance this equation? How does it prevent a punitive response from legislators and the general public if data emerges about the net growth of plastic rubbish in the environment even as recycling efforts intensify?

A buying opportunity, but only to a limited extent

Polymer buyers will likely be getting excited about the arrival of this new US capacity at a time of lower global economic growth and the erosion of demand because of the sustainability issues. There will be some short-term gains to be made.

But the buyers – i.e. the traders, distributors and the plastic converters – will face exactly the same pressure from the brand owners as the polymers producers.

The erosion of demand will affect them in very similar ways. I know of one major trader that is already looking to invest in the recycling sector. There are likely to be many more.

Maybe I am being too pessimistic. Perhaps incentive schemes can be created that clean up the mess from the 10 rivers, of all which are in the developing world, which are responsible for 90% of the plastic rubbish in the world's oceans.

And perhaps it will be possible to eventually recover the costs of these efforts. The market leaders might be able to brand their recyclable polymers in supermarkets.

They could end up being household names for all the right rather than the wrong reasons. Imagine the sales gain from, say, a flexible milk carton which contains the label "Made from 100% recyclable polymer by xxx company, and certified by the Ellen MacArthur Foundation".

What I am sure of, though, is that polymer companies should think long and hard about building any further virgin LLDPE capacity anywhere in the world.

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