

# How Fossil Fuel Companies Are Killing Plastic Recycling

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So many things we buy come packaged in plastic containers or wrappers that are meant to be used once, thrown away and forgotten — but they don't break down and can linger in the environment long after we're gone. It's tempting to think that we can recycle this problem away, that if we're more diligent about placing discarded bottles and bags into the curbside bin, we'll somehow make up for all the trash overflowing landfills, choking waterways and killing marine life.

For decades, big petrochemical companies responsible for extracting and processing the fossil fuels that make plastics have egged on consumers, reassuring them that recycling was the answer to our trash crisis. Just last month, Royal Dutch Shell executive Hilary Mercer told The New York Times that the production of new plastics was not the problem contributing to millions of tons of plastic waste piling up in landfills and drifting in oceans. Instead, she suggested, the problem is one of improper waste disposal. Better recycling, she implied, is the solution.

"We passionately believe in recycling," Mercer told the Times.

But plastic recycling is in trouble. Too much of the indestructible material exists in the world, more than our current recycling networks can handle. And the very same companies that say recycling is the answer are about to unleash a tidal wave of fresh plastics that will drown recyclers struggling to stay afloat.

"We've been trained [to think] that we can purchase endlessly and recycle everything," said Genevieve Abedon, a policy associate who represents the Clean Seas Lobbying Coalition. "There is no way that recycling can keep up."

Big oil, natural gas and chemical companies have poured an estimated \$200 billion into more than 300 petrochemical expansion projects across America from 2010 to 2018, according to the American Chemistry Council. Fossil fuel giants ExxonMobil and Shell, as well as plastic makers like SABIC and Formosa Plastics, are building and expanding at least five ethane cracker plants in Appalachia and along the Gulf of Mexico. The facilities will turn ethane, a byproduct of natural gas fracking, into polyethylene pellets, which can be made into a variety of products, including milk jugs, shampoo bottles, food packaging and the air pillows that protect your Amazon orders.



MiguelMalo via Getty Images

Already, over 350 million metric tons of new plastics are produced worldwide annually. In the next decade, production will jump 40%, spurred in part by the new manufacturing plants, according to an analysis by The Guardian.

Current rates of recycling are dismal. In Europe, about 30% of plastics are recycled, but the U.S. recycles only 9.1%, according to the Environmental Protection Agency. That's about all our networks can manage without significant improvements and investments in recycling technologies and infrastructure.

Recycling will suffer when the new manufacturing plants begin pumping out more virgin plastic, said Ted Siegler, a resource economist at waste management company DSM Environmental Services Inc., based in Vermont.

"They will hurt recycling," he said.

## The Making Of A Recycling Emergency

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In theory, more plastics should be good for recyclers. But the industry is already in the midst of a crisis.

America has grown accustomed to shipping low-value trash overseas for recycling. This practice began on a large scale in the early 2000s. Last year, that system fell apart, leaving recyclers scrambling and consumers confused.

The country never developed recycling networks that would handle all kinds of plastics, according to Heidi Sanborn, executive director of the nonprofit National Stewardship Action Council. Instead, local recyclers process only the stuff they can make money off of. Most high-value plastics, like soda bottles (which come stamped with a “1” symbol) and milk cartons or shampoo bottles (which bear a “2” stamp), are pulled out and recycled domestically. Everything else — that’s anything stamped with the numbers 3 through 7 — remains unsorted and gets shipped as “mixed plastics” to other countries, where they can still turn a profit. (Things like potato chip bags and candy bar wrappers are practically worthless and aren’t considered recyclable. People still try to mix them in with their household paper and plastic, much to the consternation of recyclers.)

“We did the world a disservice by not doing our due diligence and saying it’s worth paying American citizens to do the work and keep the jobs and the recycling infrastructure solid at home,” Sanborn said.

Plenty of other countries export their recyclables as well. Until recently, China had been the world’s largest buyer of recyclables, taking 40% of America’s scrap paper and plastic. At the end of 2017, however, China blocked shipments of foreign recyclables, causing mixed plastics (numbers 3 to 7) and paper to pile up at ports around the world. Prices for these scrap materials tanked, wiping out what little value the plastics had to begin with.

In the wake of China’s ban, with no place for mixed paper and plastics to go, curbside collection programs from Maine to Michigan to Florida were suspended. Reports have emerged from cities and towns across the country about collected recyclables ending up in landfills and incinerators.



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Recyclers across America have had to cancel service or scale back after China's clampdown on imports of contaminated foreign waste. Some have had to send recyclables to landfills.

The latest big blow to recycling came in early August with the closure of rePlanet, California's largest chain of recycling centers where consumers could return empty containers and redeem bottle deposits. Even though plastic bottles still have some value in the States, it's not what it was before the China ban.

"The scrap value of recycled materials has dropped across the board for every material, some much worse than others," explained Martin Bourque, who heads up the Berkeley, California-based Ecology Center, home to one of the country's oldest curbside recycling programs.

For recyclers like rePlanet, which made money only on the materials it sold, low scrap prices make it difficult to cover operating costs. In rePlanet's case, there were other factors at play: For one, a state-run mechanism designed to help recyclers ride out hard times didn't adapt quickly enough to save the company.

But there was another problem, too: Consumer goods companies don't necessarily want to source recycled plastics for their products, not when they can save money by purchasing freshly made plastic.

“It’s so much cheaper to buy new, virgin resin,” Bourque said.

## A Glut Of Virgin Plastics

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Since oil and natural gas are the raw materials for making plastic, the price of virgin plastic is tied to oil and natural gas prices, which are currently low. Natural gas, in particular, is now very cheap due to the fracking boom in the U.S. Remember the ethane crackers getting built in Appalachia and the Gulf of Mexico? They will only make virgin plastic cheaper, according to Siegler.

“All the new plants that are coming online are just going to continue to drive the price of virgin plastics down, which will encourage consumption on new plastic and discourage recycling,” Siegler told HuffPost.

Some contend that virgin plastic prices are already artificially low.

“The government has intervened and subsidized virgin materials extraction and made it impossible for recycling to compete,” said Sanborn.

Companies that are building new plastic manufacturing plants are getting help from the government, too. Oil and gas giant Shell is building a massive complex in Pennsylvania that will open in 2020 and produce 1.6 million metric tons of polyethylene every year. The plant will also receive \$1.65 billion in tax breaks over 25 years. A Shell official told the Northeast U.S. & Canada Petrochemical Construction Conference in 2016 that without this fiscal package, the company may not have gone ahead with the project. (The company did not respond to multiple requests for comment.)



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Part of a petrochemical plant being built on the Ohio River in Monaca, Pennsylvania, for the Royal Dutch Shell company. The plant, which is capable of producing 1.6 million tons of raw plastic annually, is expected to begin operations by 2021.

Recycling efforts, from collection to sorting to reprocessing, have not received comparable subsidies, Sanborn said.

Some of the big fossil fuel and chemical corporations are funneling money into projects meant to improve recycling — though not nearly as much cash is going toward this effort. In January, 28 oil and gas, chemical and plastics companies, including Exxon, Shell, SABIC and Formosa, formed the [Alliance to End Plastic Waste](#) and collectively pledged \$1.5 billion over five years for improving recycling infrastructure. That amount is far short of what's needed to see real change start to ripple across the recycling industry, Siegler says.

Petrochemical companies, if they wanted to, would need to make investments of up to \$20 billion every year for a decade to make sure that 50% of global plastics get recycled or reused, according to a [McKinsey analysis](#). The Alliance said in a statement to HuffPost that it hopes its initial investment will encourage governments, banks and other big corporations to spend more on recycling.

## Where Do We Go From Here?

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Conservationists still believe that recycling is a worthwhile endeavor, just not a silver bullet to fixing our plastic waste crisis.

“Recycling definitely has to be a part of the solution,” Genevieve Abedon, of the Clean Seas Lobbying Coalition, told HuffPost.

Siegler years ago proposed a plastic tax to pay for much-needed recycling infrastructure. Charging plastic producers just a penny a pound — roughly a 1% tax, since most resins cost a dollar a pound — would raise \$4 billion to \$5 billion per year, Siegler estimated.

“The price of plastic is too low,” he told HuffPost. “It doesn’t reflect the environmental damage associated with plastic.”

His idea has not caught on.

A landmark pair of bills in the California Legislature would help recyclers compete with virgin plastic producers by boosting demand for recycled plastic. The measures seek to force manufacturers to use more recycled materials in their plastic products.

“If we can increase the demand for recycled plastic, investment will then flow through the whole recycling chain,” said Kara Pochiro, of the Association of Plastic Recyclers.

Though the bills failed to pass before the end of the legislative session, they’ll be eligible for a vote again next year.

Consumer goods companies could make a big difference by signing long-term contracts with recyclers for material, Pochiro says. This would help insulate recycling companies from fluctuations in the commodity market and potentially stop more collapses like that of rePlanet.

Last November, beverage maker Nestle Waters North America signed a multiyear contract with CarbonLITE, a company that recycles and produces food-grade PET plastic. With this guaranteed demand, CarbonLITE is now building a new facility in Lehigh Valley, Pennsylvania, that is expected to recycle more than 2 billion used bottles every year.

There are things that shoppers can do, too.

“Buy recycled,” Pochiro recommended.

Sanborn said that consumers who don’t like the plastic packaging they receive with their products should lay it all out on the floor, take a photo of the plastic, upload it to social media, tag the company that sent it to them and complain.

“Be really loud and squeaky. The squeaky wheels get greased,” she said.