

FOUR KEYS TO MORE SUSTAINABLE PLASTIC

“It would be silly to suggest that we do away with plastics. They are too valuable, too ubiquitous and too useful. What we should do away with, however, is the way that they are made, some of the ways that we use them, and certainly what we do with them when they have done their job.”


-Tom McKeag in GreenBiz

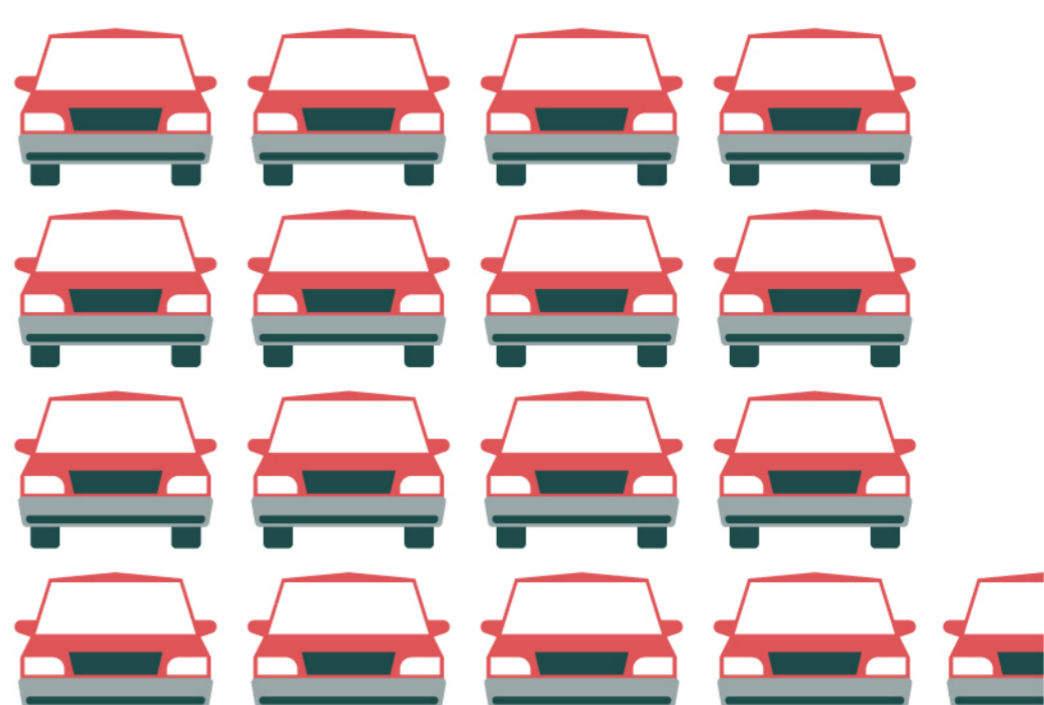
Here are four ways to make plastics more sustainable.

1. RENEWABLE FEEDSTOCK

Organic materials such as starch and other natural fibers can replace petroleum-based feedstocks, greatly reducing the reliance on carbon-dioxide-emitting fossil fuels.

Reducing petroleum feedstock by 25% can decrease greenhouse gas emissions equivalent to removing 16.5 million passenger cars from the road every year.^{[1][2][3]}

 = 1 million cars



2. RECLAIMED FEEDSTOCK

Biobased industrial byproducts have proven effective fillers for petroleum-based plastics. Wood fibers reclaimed from milling operations and agricultural byproducts can be used to reduce reliance on non-renewable materials.

Reducing petroleum feedstock in plastics by just 10% saves 280 million barrels of oil a year, reducing CO₂ emissions by the equivalent of the CO₂ sequestered by 250 million acres of forest.^{[1][2][3]}



3. RECYCLED FEEDSTOCK

Using one ton of recycled plastic to replace some or all of the virgin petroleum-based feedstock can save:

16.3 barrels (685 gallons) of oil^[4]

30 cubic yards of landfill space^[4]

5,774 kWh energy^[4]



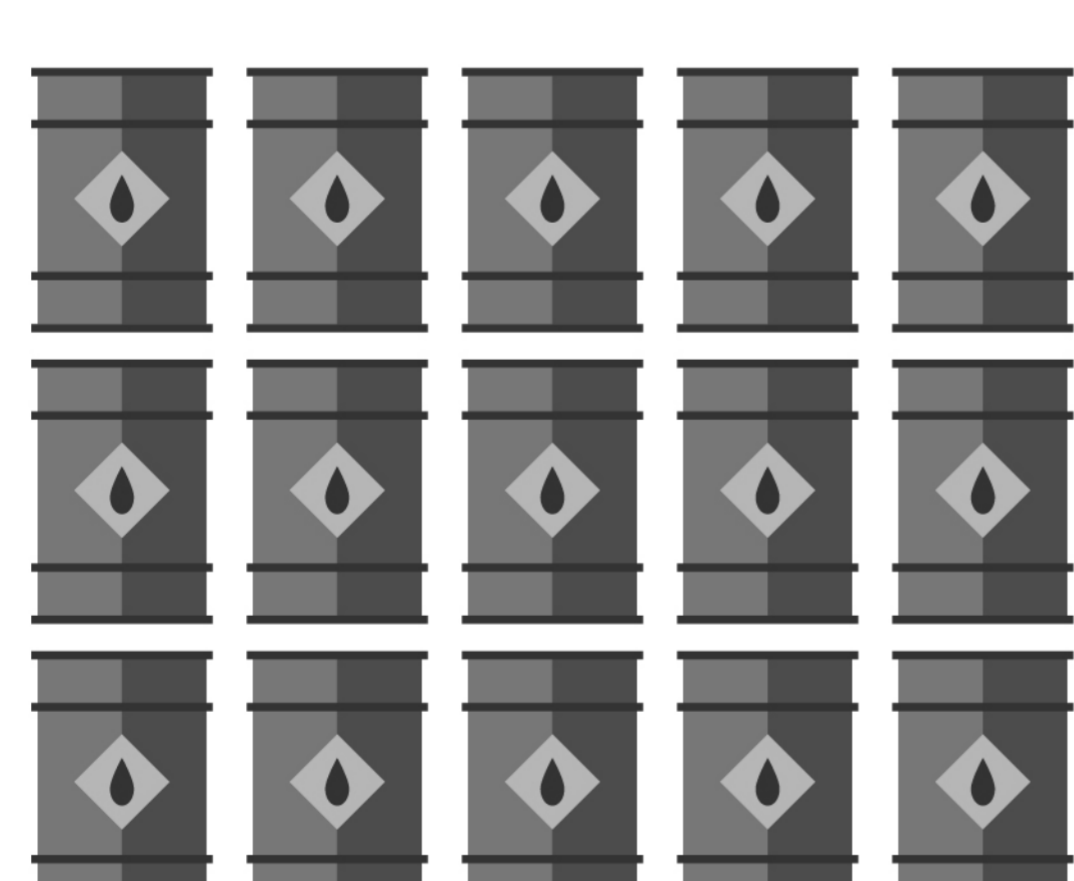
That's enough energy to power the average American home for over 6 months.^[5]



4. BIODEGRADABLE MATERIALS

Biodegradable plastics are not a solution for plastic litter, but they can help reduce landfill waste, especially when used for food service in conjunction with composting of food waste and in many packaging applications.

Solid waste landfills are one of the largest man-made sources of methane gas (CH₄) in the United States. Methane is a powerful greenhouse gas, 23 times more effective at trapping heat in the atmosphere than CO₂.^[6]



Increasing composting of food scraps by 25% in the U.S. would decrease GHG emissions equivalent to saving more than 15 million barrels of oil per year.^{[6][7]}

 = 1 million barrels of oil



Reducing waste disposed in landfills can have climate benefits equivalent to removing 21% of U.S. coal-fired power plants.^[8]

While the problems of waste and pollution are large and complex, sincere efforts on all of these fronts will decrease the environmental impact of the plastics products we use every day.

Brought to you by:



Sources:

[1] <http://www.iea.org/aboutus/faqs/oil/>

[2] <https://www.unitjuggler.com/convert-energy-from-Mboe-to-kWh.html?val=280>

[3] <http://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>

[4] <http://www.wm.com/location/california/ventura-county/west-hills/recycle/facts.jsp>

[5] <https://www.eia.gov/tools/faqs/faq.cfm?id=97&t=3>

[6] <http://www3.epa.gov/region9/climatechange/pdfs/ghg-land-materials-management.pdf>

[7] <http://numero57.net/2008/03/20/carbon-dioxide-emissions-per-barrel-of-crude/>

[8] http://ilsr.org/wp-content/uploads/2008/06/fullreport_stoptrashingthecollegeclimate.pdf