



Renewable Plastics Report

Renewable plastics · true sustainability

- Neither bioplastics nor recycling fossil-fuel plastics are sustainable •
- The federal government comes to the rescue – talk shifts to *mass balance* •
 - *Psychology Today* PhD says recycling is making things worse •
 - Elon Musk supports renewable energy •

New Products & Innovations-- -- | ----- Sustainability & Environment

Renewable Plastic & Mass Balance

Renewable resources are those that can be replaced *naturally* over a period of time.

It goes without saying that plastic made from Renewable Natural Gas (RNG) is the sustainable solution for Earth. A perfect “**mass balance**”.

The more people living on the planet, the more RNG and greater the demand. The fewer people, the less RNG and less demand. A built-in balance.

RNG Plastics prevent GhG, use less energy, have no effect on climate change, with superior performance properties.

In comparison, Bard agrees, “A 10-year-old kid could tell you that bioplastics are not a sustainable farming practice. They are made from plants, and plants need land, water, and other resources, to grow. If we use these resources to make bioplastics, then we have less land, water, and other resources to grow food. This could lead to food shortages and hunger.”

“Additionally, the production of bioplastics can release harmful emissions into the atmosphere.

The Feds Have Plans

Great news ahead! Members of Congress are talking about the importance of mass balance.

Mass Balance Definition

The application of the law of conservation of mass to a physical system. Used to track the movement of mass within a system, and to identify any mass that is entering, leaving, or accumulating within the system.

It is a fundamental tool in environmental engineering, used to protect the environment. As it pertains to plastics:

Mass balance can be used to track the amount of plastic that is produced, consumed, and disposed of.

This info can be used to identify areas where plastic pollution is a problem and to develop strategies to reduce plastic waste:

- Water quality management
- Air quality management
- Hazardous waste management
- Contaminated site remediation

These emissions contribute to climate change, which is a major threat to our planet."

Much more energy, gasoline, and oil is consumed to make bioplastics with inferior properties:

1. Plant crops (tractors, laborers, apply GM fertilizers and pesticides).
2. Harvest the crops (more energy, labor).
3. Discard waste (2.2 tons of corn makes 1 ton of biopolymer).
4. Polymerize the corn (starch).
5. Convert it into a plastic compound (uses non-renewable substances).
6. Make bioplastic products with inferior qualities.
7. After use, send it to a landfill for [supposed] composting (more energy to heat it up).
8. Ship the compost back to the farm, and;

Start over again!

In reality, compost from bioplastics is not shipped back to the farm. To restore its topsoil, it purchases manure, soil amendments, and compost from industrial suppliers (using more energy).

Compare the bioplastic folly to ***RNG Plastics: In EPA partnered LMOP landfills, mother nature converts it into renewable biogas or RNG feedstock:***

A true closed loop

Remember, most plastics in the U.S. come from biogas -- natural gas!

- Climate change mitigation

Mass balance is complex and essential to understand and protect the environment.

A thought to consider

Both fossil-fuel plastics and bioplastics release GhG (CO₂ and methane) into the atmosphere when decomposing in EPA regulated landfills.

Fossil-fuel plastics slowly release it over 80-100 years. Bioplastics release it much faster, usually less than a year.

The way to stop this climate endangering practice:

1. Stop discarding bioplastics in EPA regulated landfills, and;
2. Convert fossil-fuel plastic into RNG Plastic so it can be safely captured and turned into renewable biogas.

Take your pick

Recycling is ***down-cycling***. **90% of plastics are NOT recyclable nor recycled anyway.**

Mass balance is key to make decisions on recycling (not *downcycling*) and what can be recovered efficiently in the existing landfill infrastructure.

With Congress asking the EPA to get more involved with recovery and recycling at their regulated landfills, we are in good hands in Washington DC!

Industry News and Trends

Recycling Isn't Virtuous; It's Making Things Worse

- Recycling is much less sustainable than people think; yet, recycling continues to be lauded as an ethical means of disposal.
- People gain moral satisfaction from recycling, which can cause harm that counteract the minimal environmental benefits that recycling provides.
- Studies show that people frequently engage in "aspirational recycling" and succumb to the "negative footprint illusion."



Source: Nareeta Martin/Unsplash

<https://www.psychologytoday.com/us/blog/moral-boundaries/202304/recycling-isnt-virtuous-its-making-things-worse>

<https://www.cnn.com/2023/04/11/us/richmond-indiana-recycling-plant-fire/index.html>

Elon Musk Supports Renewable Energy

He says it will cost \$14 trillion for the world to rely on fossil fuels but a lot less to convert to clean energy. ***Renewable biogas is a Low Carbon Fuel Standard (LCFS), the same as solar power.*** As long as humans live on earth, there will be renewable biogas.

EPA regulated landfills serve 80%+ of the U.S. population and safely capture renewable biogas generated from anaerobic digestion of organic matter and RNG Plastics.



[Elon Musk says a clean energy future would be cheaper](#)
[| Fortune magazine](#)

Next newsletter: FTC violations, changes. Composting myths damage the atmosphere!



RNG Plastics - good for mankind



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We always welcome your questions! Please email hello@rngplastics.com